

BEFORE THE  
CALIFORNIA ENERGY COMMISSION

In the Matter of: ) Docket No. 09-ALT-1  
 )  
2010-2011 Investment Plan for the )  
Alternative and Renewable Fuel and )  
Vehicle Technology Program )

2010-2011 Advisory Committee Meeting for the  
Alternative and Renewable Fuel and Vehicle  
Technology Program

California Energy Commission  
1516 Ninth Street  
First Floor, Hearing Room A  
Sacramento, CA 95814-5512

FRIDAY, APRIL 30, 2010

9:00 A.M.

Reported by:  
Peter Petty

COMMISSIONERS PRESENT

James D. Boyd, Vice Chair and Presiding Member,  
Transportation Committee  
Tim Olson, His Advisor  
Anthony Eggert, Commissioner and Associate Member,  
Transportation Committee  
David Hungerford, Advisor To Commissioner Eggert

**Advisory Committee Members Present (Via WebEx)**

Shannon Baker-Branstetter, Consumer Union  
Tom Cackette, California Air Resources Board  
Tim Carmichael, California Natural Gas Vehicle Coalition  
R. Brooke Coleman, New Fuels Alliance  
Will Coleman, Mohr Davidow Ventures  
Peter Cooper, California Labor Federation  
Daniel Emmett, Energy Independence Now  
Lesley Brown Garland, Western Propane Gas Association  
Barbara Halsey, California Workforce Investment Board  
Bonnie Holmes-Gen, American Lung Association  
Roland Hwang, Natural Resources Defense Council  
Karnig Kazarian, California Business Transportation and  
Housing Agency  
Mark Leary, California Department of Resources Recycling  
and Recovery  
Patricia Monahan, Union of Concerned Scientists

**Also Present**

Jack Kitowski, California Air Resources Board

Public Comment

Enid Joffe, Clean Fuels Connection  
Suzanne Seivright, Valley Power Systems  
Adam Walter, AE Biofuels, Inc  
Eileen Tutt, California Electric Vehicle Coalition  
John Marsh, Webasto Products  
Catherine Dunwoody, California Fuel Cell Partnership  
Chuck White, Waste Management  
Tom Fulks, Daimler  
Lynette Brinkman, Alliance Autogas  
Paul Staples, HyGen Industries  
Colby Morrow, Southern California Gas Company  
John Boesel, CALSTART

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1 P R O C E E D I N G S

2 APRIL 30, 2010

9:14 a.m.

3 VICE CHAIR BOYD: Good morning, everybody. Sorry  
4 for the delay. I am not moving very quickly today.  
5 Welcome, everybody. I was waiting a moment to see if  
6 anymore seats would fill up, but I am not quite sure how  
7 well we are going to do on our attendance. And I want to  
8 thank the Advisory Committee members for being here in what  
9 I can only say are really tough times, so I doubly  
10 appreciate the fact that you are here. If your lives are  
11 anything like our lives here at the Energy Commission, I  
12 realize it is quite a shore -- a chore to get -- maybe it is  
13 a long shore, too - but a chore to get from issue to issue  
14 and day to day. So welcome to this Advisory Committee  
15 Meeting on Alternative and Renewable Fuel and Vehicle  
16 Technology Program, a long way to say the AB 118 program  
17 which, in this room, I think we understand that phraseology,  
18 but a lot of people in the outside world do not, unless we  
19 give them the full title.

20 We have a pretty full agenda today. I know we are  
21 going to make accommodation for some non-advisory committee  
22 members who have serious time constraints, and I am looking  
23 to Leslie up there to prompt me and us on that point. And  
24 we have a large task ahead of us, it has been not only these  
25 tough times, it has been a rough year more or less since the

1 last Investment Plan was put together, articulated by this  
2 agency after your input, and then changed somewhat as we  
3 went through what we hoped were the depths of the economic  
4 crisis and tried to adjudicate those issues and the economic  
5 stimulus program of this country, in this state, and what  
6 have you. So it has left things kind of hanging somewhat.  
7 But nonetheless, we are here and ready to move forward with  
8 the staff's latest recommendations, and anxious to receive  
9 your input. So since I delayed the meeting, I will cut  
10 short my comments and ask Commissioner Eggert if he would  
11 like to say a few words, and then turn it over to the staff  
12 to begin the program before we start getting your input and  
13 comments and questions answered.

14 COMMISSIONER EGGERT: Thank you, Commissioner and  
15 good morning, everyone. I also just want to echo the  
16 appreciation that we have for you spending today with us and  
17 very much looking forward to your input and advice on the  
18 Strategic Investment Plan. I have now been on the job for  
19 four months and it has been a very fascinating, challenging  
20 and rewarding four months to get to know the staff working  
21 on 118 program -- I would say extremely hard working staff  
22 on this program, both in implementing the previous  
23 Investment Plan, which we are going to talk a little bit  
24 about, I think, and then also putting forth a plan, a  
25 Strategic Plan for the next round of funding. I would say

1 we do have sort of a number of different goals with this  
2 program, which include maximizing petroleum reduction,  
3 increasing energy diversity, continuing to improve the  
4 environmental characteristics of our fuels, including  
5 improved air quality, and achieving our year and our long-  
6 term greenhouse gas goals, all of those we are trying to  
7 accomplish simultaneously, and so in thinking about how to  
8 put together a strategic plan to do that, again, I would  
9 very much welcome your comments as to whether or not this  
10 current plan reflects all of those priorities. And I think  
11 the other area that I am hoping to receive input and advice  
12 and counsel from this group is really looking at sort of how  
13 we are making these investments, how we are taking these  
14 various fuel pathways and these various technologies from  
15 the R&D phase through commercialization, and the nature of  
16 our investments, how they are leveraging private activity,  
17 and to the extent that we are doing this in a way that does  
18 sort of maximize the value of the public investment. Again,  
19 very much an interest of mine, so looking forward to an  
20 informative and information-packed day, and thanks again for  
21 coming.

22 VICE CHAIR BOYD: Maybe a quick comment if I  
23 might. I know all of you kind of know each other, but maybe  
24 we should go through introductions because there are people  
25 listening and they would like to know who is sitting at the

1 table. So beyond the two of us, maybe we could start over  
2 here with Brooke and go around quickly and let folks know  
3 who is here, if you would, please.

4 MR. COLEMAN: Brooke Coleman, New Fuels Alliance.

5 MS. BAKER-BRANSTETTER: Shannon Baker-Branstetter,  
6 Consumers Union.

7 MR. CARMICHAEL: Tim Carmichael, California  
8 Natural Gas Vehicle Coalition.

9 MS. GARLAND: Lesley Garland, Western Propane Gas  
10 Association.

11 MS. MONAHAN: Patty Monahan, Union of Concerned  
12 Scientists.

13 MR. LEARY: Mark Leary, CalRecycle.

14 MS. HALSEY: Barbara Halsey, California Workforce  
15 Investment Board.

16 MR. COOPER: Peter Cooper, California Labor  
17 Federation.

18 MS. HOLMES-GEN: Bonnie Holmes-Gen, American Lung  
19 Association in California.

20 MR. CACKETTE: Tom Cackette from the Air Resources  
21 Board.

22 MR. HWANG: Roland Hwang, Natural Resources  
23 Defense Council.

24 MR. HUNGERFORD: David Hungerford, Advisor to  
25 Commissioner Eggert.

1 MR. OLSON: Tim Olson, Advisor to Commissioner  
2 Boyd.

3 VICE CHAIR BOYD: All right, thank you all. Now,  
4 Leslie.

5 MS. BARODY: Thank you, Commissioners. Oh, one  
6 more thing.

7 VICE CHAIR BOYD: On the phone we may have  
8 Advisory Committee members.

9 MS. BARODY: Yes, we have a few. Do you want to  
10 go ahead and identify yourselves on the WebEx, please?

11 MR. EMMETT: Sure. Daniel Emmett, Energy  
12 Independence Now.

13 VICE CHAIR BOYD: Good morning, Dan.

14 MR. EMMETT: Good morning.

15 MS. BARODY: Chelsea Sexton, are you out there?  
16 She had said she would be on today, maybe she will be with  
17 us later. I think that is it.

18 VICE CHAIR BOYD: Any other Advisory Committee  
19 members on the phone? I guess not, all right, Leslie, if  
20 you would?

21 MS. BARODY: Okay, thank you, Commissioners.  
22 Well, welcome again. We are really happy you could be here  
23 with us today. Before I go on, we have to cover a few  
24 housekeeping issues, so most of you have been here before,  
25 but if you have not, the bathrooms are out to the back on

1 the left, and there is a snack bar up the stairs on the  
2 right, and that, I understand, closes at 12:30, so if you  
3 need something you probably want to get it this morning. In  
4 the unlikely event of an emergency, Energy Commission staff  
5 will lead you out the backdoors to the adjacent park across  
6 the street.

7           So let's go over the agenda. We will start out  
8 with my review of the Investment Plan schedule and, after  
9 that, Chuck Mizutani, our Manager of the Emerging Fuels and  
10 Technologies Office, will give a program update, as well as  
11 a summary of the key changes to the second Investment Plan.  
12 After that, we will have Enid Joffee come up and she will  
13 speak for three minutes because she has to catch a flight,  
14 so we are going to let her do her public comment at that  
15 point, and then we will welcome comments from the Advisory  
16 Committee, and that will go until lunch. We will take an  
17 hour break for lunch and then we will resume if we need to  
18 with Advisory Committee members, and then we plan on having  
19 public comment about 2:00. Now, if you have public comment,  
20 you can fill out a blue card that are found as you enter,  
21 there are some blue cards out there in a box, where you can  
22 give it to Charles Smith, he is right here. All right, so  
23 we will end after public comment.

24           Regarding our Investment Plan schedule, in May we  
25 will conduct three public workshops throughout California,

1 the first will be May 20<sup>th</sup> in Long Beach, and then that will  
2 be followed by a public workshop on the 25<sup>th</sup> in Stockton, and  
3 that will be held at the San Joaquin Council of Governments,  
4 and then May 27<sup>th</sup> at the CPUC in San Francisco. So feel free  
5 to come out to any of those workshops. In late June, we  
6 will be actually posting the Committee Investment Plan and  
7 then, during the 30-day required review period, we will host  
8 a public hearing on the final Committee Investment Plan.  
9 Then in late July we hope to have the adoption of the plan.  
10 Are there any questions on the agenda or the Investment Plan  
11 schedule? Anybody? I guess not, okay, well, I will turn it  
12 over to Chuck, then.

13 MR. MIZUTANI: Good morning, Advisory Committee  
14 Members and Commissioners. I want to give you a short  
15 summary and status of the progress we have made in  
16 encumbering the 2008-2010 program funds of \$176 million.

17 In the area of workforce development, we have  
18 encumbered through two interagency agreements with the  
19 Economic Development Department for \$4.5 million; they have  
20 awarded some initial projects in the area of workforce  
21 development in developing training courses for various  
22 aspects of alternative fuel use and transportation  
23 maintenance and things like that. And we are looking at  
24 another solicitation some time this year to encumber the  
25 remaining funds available in that interagency agreement,

1 which is a total of \$4.5 million. The other \$4.5 million  
2 was through an interagency agreement with the California  
3 Community Colleges Chancellor's Office and right now, where  
4 they are at is they are doing a needs assessment for  
5 California and, in addition, they will be developing course  
6 material that would be used by the various community  
7 colleges in the future. In addition to that, we had one or  
8 two provide support by way of cost share to California  
9 companies competing for the Federal ARRA funds and that has  
10 closed, and the result of that has been that we have  
11 provided \$36,520,000 in AB 118 funds to various projects  
12 that were awarded Federal ARRA funds of a total of  
13 \$93,632,000. The number of awards for California were nine  
14 projects. And we are now in the process of taking those  
15 grant awards to the Commission for approval.

16           Recently, we just closed the solicitations for  
17 three areas, the first one being the biomethane production  
18 solicitation, the second one being the medium- and heavy-  
19 duty vehicles, and the third being fueling infrastructure,  
20 and the fueling infrastructure included electric charging,  
21 natural gas, and E-85 stations. For biomethane production,  
22 we have finished our evaluation and have proposed or  
23 recommended awards for four biomethane production facilities  
24 and those award notices were posted recently. And they will  
25 be going to business meetings for Commission approval in the

1 near future. For biomethane production, we had available  
2 \$21.5 million; of that \$21.5 million, \$21,479,500 were  
3 awarded.

4 We are now in the process of reviewing and scoring  
5 proposals in the fueling infrastructure category, and we  
6 will be taking our recommendations to our Transportation  
7 Committee in the near future. There is currently  
8 \$13,800,000 available for projects using the three fields of  
9 electricity, natural gas, and E-85. The third solicitation,  
10 we are in the middle of the review and scoring process, and  
11 that is the medium- and heavy-duty vehicles. And right now,  
12 what is available is \$9.5 million.

13 We just recently got approval from our  
14 Commissioners for a Master Agreement, an interagency  
15 agreement, with the State Creditor's Office to assist us in  
16 providing support to alternative fuel proposals that are  
17 seeking loan agreements. The Master Agreement has right now  
18 a total of \$39,912,000. Those are allocated to three  
19 solicitations, two of which have just been released and a  
20 third that is in the process of being released. The two  
21 that have been released are the new biofuel production  
22 plants, which have available \$14,912,000, and these are for  
23 advanced biofuel production facilities using energy crops or  
24 in-state residues, or algae. And in that, the options or  
25 the availability of funding will either be in the form of

1 grants or loans. Those projects that are seeking loans,  
2 once the Commission has selected those projects, they will  
3 be then sent to the Treasurer's Office to assist them in  
4 securing those loans. The second one that we have a  
5 solicitation on is the Alternative Fuel Manufacturing  
6 Facilities solicitation for a total of \$19 million. And I  
7 think the due dates for those two solicitations are probably  
8 in about two weeks? May 20<sup>th</sup> is the due dates for those  
9 proposals.

10 The third solicitation that would be going to the  
11 Treasurer's Office is the existing Ethanol Producers  
12 Incentive Solicitation, and there we have identified up to  
13 \$6 million for that solicitation.

14 MS. HOLMES-GEN: Could you just say one more time,  
15 what is the manufacturing item again, the \$19 million?

16 MR. MIZUTANI: The manufacturing is for advanced  
17 alternative fuel vehicles and component manufacturing.

18 We are currently working on the following  
19 solicitations, which right now have not been released yet:  
20 the Medium- and Heavy-Duty Vehicles Center of Excellence  
21 will be a request for proposals, a competitive process to  
22 seek an entity that would develop demonstration projects  
23 using alternative fuels or advanced hybrid technology for  
24 the medium- and heavy-duty vehicle sector. And these will  
25 be funding demonstration projects.

1           And the hydrogen fueling infrastructure that we  
2 are working on, it is for \$22 million and it will be for the  
3 construction of hydrogen fueling facilities in strategic  
4 locations. The Propane School Bus Incentives is an RFP for  
5 \$2 million that will target school districts and their need  
6 for propane buses.

7           In addition, we are working on a sort of  
8 contracting mechanism in the area of sustainability for \$2  
9 million, and it is focused on the forestry area. And we are  
10 working on an interagency agreement with the Division of  
11 Measurement and Standards for \$4 million to develop type  
12 approved fueling dispensers, as well as developing fuel  
13 quality standards for both hydrogen and biodiesel.

14           The third, well, the remaining funds for the  
15 workforce development of \$6 million will be put into an  
16 interagency agreement with the Employment Training Panel.  
17 And then, finally, there is \$1,450,000 that we have  
18 identified that would be put to develop an interagency  
19 agreement with the National Renewable Lab for technical  
20 assistance to our Investment Plan process, as well as our  
21 program. In addition, we are working on an interagency  
22 agreement with the University of California, Irvine, to  
23 develop and expand their street model to be able to have the  
24 capability for all alternative fuels, as well as expanding  
25 it. Right now, they have that capability for the South

1 Coast Air Basin; we would like to be able to expand that  
2 statewide.

3 So that pretty much identifies the entirety of the  
4 \$176 million that we have available from Fiscal Year 2008-  
5 2010.

6 VICE CHAIR BOYD: Feel free to ask questions,  
7 Committee members, of Chuck and the staff.

8 MS. MONAHAN: Do you have a sense for the timing  
9 --

10 VICE CHAIR BOYD: Dan?

11 MR. EMMETT: I was just going to ask the same  
12 question about the timing for the ones that are still in the  
13 pipeline.

14 VICE CHAIR BOYD: Okay, Patty, do you want to -  
15 sorry to interrupt you, but I could hear Dan, barely.

16 MS. MONAHAN: No, I appreciate that. We do not  
17 want to lose the folks on the phone.

18 MR. MIZUTANI: I would say that, in terms of the  
19 Medium- and Heavy-Duty Vehicle Center of Excellence, we are  
20 still in the process of finalizing the RFP package and  
21 submitting that to our contracts office in order to post, so  
22 that is probably about a couple months away. On the  
23 hydrogen fueling infrastructure, we are hopefully close to  
24 being able to post that. For the propane school bus  
25 incentives, that will probably be in a two-month or so

1 deadline in terms of posting. The sustainability analysis,  
2 we are looking to try to go to a business meeting as soon as  
3 possible. Right now, at this point, we are sort of working  
4 with our sister agencies, as well as other stakeholders in  
5 trying to develop the types of tasks that would be needed to  
6 develop a better understanding of sustainability in terms of  
7 for forests. But we would like to be able to try to get  
8 that encumbered as soon as possible, but I cannot at this  
9 time say exactly when. With the division measurement  
10 standards, that should be on our business meeting fairly  
11 soon. And the Employment Training Panel, that is scheduled  
12 for approval at the May 5<sup>th</sup> business meeting. And then,  
13 finally, with the NREL and UCI's, those two interagencies,  
14 probably we are talking about a couple of months, as well.

15 MR. COLEMAN: Chuck, Brooke Coleman of New Fuels  
16 Alliance. Can you go back one slide? I just want to ask  
17 for a point of clarity. At the very bottom there, existing  
18 ethanol producer incentives, it says "Future" at the  
19 beginning of that sentence, and then it says "up to \$6  
20 million." By "future," that means this fiscal year, not --

21 MR. MIZUTANI: Yes. Right. "Future" for that,  
22 what it means is we have not posted the solicitation yet.  
23 But that is our intent is that it is going to be this fiscal  
24 year.

25 MR. COLEMAN: Okay, thank you.

1 MR. EMMETT: Chuck, this is Daniel again, just  
2 for clarification on that list -

3 VICE CHAIR BOYD: Dan?

4 MR. EMMETT: Yes.

5 VICE CHAIR BOYD: Could you speak up a little  
6 louder? We are really having trouble hearing you here.

7 MR. EMMETT: Oh, sorry about that. Yeah, I was  
8 just going to ask for a point of clarification on the next  
9 slide. For those items you just went through, it sounds  
10 like some of them are going to happen in the remainder of  
11 this fiscal year, but some will not? My understanding is  
12 that this all had to at least be encumbered by the end of  
13 this fiscal year. Is that not accurate?

14 MR. MIZUTANI: In terms of having to be encumbered  
15 this fiscal year, we are talking about \$75 million of the  
16 \$176.

17 MR. EMMETT: Oh, I see.

18 MR. MIZUTANI: So right now, in terms of this  
19 first page that is on the screen, these are either they have  
20 been encumbered or they are very close to being encumbered.  
21 On the future ones, those, a couple of them, our goal is to  
22 be able to encumber this fiscal year, but it is not  
23 necessary for all of them to be encumbered this fiscal year  
24 just because we have a two-year encumbrance period, so the  
25 \$101 million is not necessarily constrained to that. But I

1 think sort of our goal is not to stretch this out, it is  
2 really to try to get the money out as quickly as possible.

3 MR. EMMETT: Thank you.

4 MR. CARMICHAEL: This is Tim Carmichael. Just a  
5 comment on that last point and then a question. The comment  
6 is, though around this room we have a lot of friends in the  
7 Legislature, when money is tight and funds have not yet been  
8 encumbered, they sometimes get grabbed, and so I do not want  
9 to read too much into what Daniel was saying, but from my  
10 perspective, and I imagine others', the sooner they are  
11 encumbered, the better, the safer, if you will, to make sure  
12 that the money does not disappear. And then I had a  
13 question on the other slide, actually, on manufacturing  
14 again. I am just curious, I do not have a judgment on this,  
15 but am just curious, is that funding available to  
16 manufacturing operations in any state, or only in  
17 California?

18 MR. MIZUTANI: Only in California.

19 MR. CARMICHAEL: Thank you.

20 MS. BAKER-BRANSTETTER: Shannon Baker-Branstetter.  
21 Just a point of clarification about the Division of  
22 Measurement Standards, something you said was about that was  
23 for hydrogen? So if those standards are being developed,  
24 but there is an open -- or there are going to be the fueling  
25 infrastructure, you said \$22 million funded, are those

1 standards going to be retroactive? How do those interact  
2 with each other if the standards are not yet developed?

3 MR. MIZUTANI: It is more in terms of sort of the  
4 reliability with respect to dispensing the - what you pay  
5 for is what you get. And right now, the fueling stations  
6 can dispense fuel, but it is not through sort of the typical  
7 way in terms of someone driving up and using their ATM card,  
8 or cash, or whatever. They have to basically have an  
9 agreement or contract. So that activity is intended to  
10 allow, when the time comes, where fuel cell vehicles or  
11 whatever are on the streets, being operated by sort of the  
12 citizens of California, that the individual can just go up  
13 to a fueling station and use their ATM or credit card or  
14 cash to pay for that. So right now we cannot do that, so  
15 that is the purpose of the work with the Division of  
16 Measurements and Standards.

17 MS. BAKER-BRANSTETTER: So that is just for  
18 payment methods, it is not the actual infrastructure being  
19 discussed?

20 VICE CHAIR BOYD: Let me jump in here and just say  
21 what we have going now in California, and have had for some  
22 time and will into the near future, is a research and  
23 demonstration program, let's just say, and all the hydrogen  
24 is free to the user, but most of the users are manufacturers  
25 with their vehicles in a demonstration mode. And that is

1 what we anticipate into the near future, and I think most  
2 of the \$22 million, if I am not mistaken, is all directed at  
3 continuing to expand the fueling infrastructure for the  
4 demonstration programs that the manufacturers have promised  
5 us to roll out more vehicles. The fuel, as Chuck said, is  
6 free to the users because there is not a mechanism in place  
7 that takes the Division of Weights and Measures to put in  
8 place, you know, certified dispensers and all the procedures  
9 and protocols so that those who dispense fuel can actually  
10 charge for it. And this is in anticipation of the day that  
11 everybody hopes arrives sooner rather than later, when the  
12 general public will finally have access to hydrogen fuel  
13 cell vehicles and be in the position to be able to pay for  
14 the fuel they use, and what have you. So these events are  
15 occurring concurrently as we prepare for the future, and  
16 that is what the money to Weights and Measures is for, is to  
17 get over that last hurdle of getting the systems certified  
18 for use by retail customers in California. The  
19 infrastructure that the \$22 million hopefully will pay for  
20 is to match what the manufacturers have told us are their  
21 plans to put in effect more demonstrations of vehicles. So  
22 it is really to support some more of the development,  
23 demonstration and deployment of vehicles, but pre-customer  
24 use, so to speak.

25 MS. BAKER-BRANSTETTER: And the new retail -

1                   COMMISSIONER EGGERT: Yeah, just to expand on  
2 that a little bit. So in terms of the current way that the  
3 fueling is done is, either it is provided for free, or  
4 through contract. This is required if you want to sell at a  
5 retail level on a per unit basis, so it defines all the  
6 characteristics, the pressure and temperature, and it is  
7 basically a technical specification for retail dispensing so  
8 that the customer knows that they are getting what they pay  
9 for, that is, I think, the primary purpose of that activity.

10                  MR. COOPER: I just have a quick question  
11 expanding on the question that Tim put forward about the  
12 funds being used in the state. Does that cover all the  
13 funds under the AB 118? Or is it just for manufacturing,  
14 the requirement that it be in the State of California?

15                  MR. MIZUTANI: I think it is in California, all  
16 the funds are pretty much going to be in California, the  
17 vehicles, the infrastructure, the production.

18                  MR. COOPER: Thanks.

19                  MS. HOLMES-GEN: I have a question. It is Bonnie  
20 Holmes-Gen, and I am just back on the hydrogen issue. Sorry  
21 if I missed this, but when would you expect those stations  
22 would be operated? And how long are they required to  
23 operate after they receive these funds? How long can we be  
24 certain they will continue to be in operation?

25                  MR. MIZUTANI: Right now, what we are seeing is, I

1 think what we have identified is that, from the point of  
2 them starting the process to get the permits and construct  
3 the facilities and all that, that is a 12-24-month period.  
4 And then you add in the time for our solicitation process  
5 and award, which that would be probably another six to eight  
6 months, so --

7 MS. HOLMES-GEN: So you are saying two and a half  
8 to three years, they would be operating?

9 MR. MIZUTANI: Well, if you take the 24 months.

10 MS. HOLMES-GEN: If you take that full time. You  
11 do not have a specific date?

12 MR. MIZUTANI: No.

13 MS. HOLMES-GEN: And how long, once those stations  
14 are up and running, is there a time requirement that they  
15 need operation, a certain length of time?

16 MR. MIZUTANI: No. What we are paying for is  
17 really the construction of the facility, not necessarily for  
18 the operation.

19 MS. HOLMES-GEN: I understand that, but there is  
20 no conditions attached in terms of timing? I am just  
21 asking.

22 MR. MIZUTANI: Peter, you might be able to respond  
23 to that.

24 MR. WARD: We do have a minimum requirement for  
25 operation of three years, we expect them to go on beyond

1 that. It is uncertain as to how long it will take to site  
2 the stations once the awards are made, it can range from  
3 anywhere from eight months to two years, we hear. We are  
4 crafting our solicitation so that, in the evaluation, that  
5 those proposed stations will meet the needs of the OEM's,  
6 provide additional capacity per station of additional  
7 renewable hydrogen, and an accelerated development time.  
8 They will all receive additional points and evaluations. So  
9 we are trying to push that forward as fast as we can through  
10 the evaluation of criteria in the solicitation. So we are  
11 cognizant of when the vehicles arrive and we want to make  
12 sure the stations meet up with that. That would be the  
13 success that we are looking for. So, in answer to your  
14 question, a minimum of three years, we fully expect those  
15 stations would be operational far longer than that because  
16 they will be in a retail environment as opposed to previous  
17 stations that have had many termed out.

18 MR. MIZUTANI: Thanks, Peter. Tom?

19 MR. CACKETTE: Chuck, can you give us kind of a  
20 high level description of how these two slides, which is the  
21 funding that you have committed and the anticipated funding  
22 differs, and in what areas from the Investment Plan 1 that  
23 was approved by the Commission, so that we can kind of see  
24 where things are shifting?

25 MR. MIZUTANI: We had prepared a table basically

1 identifying that, and at the request of some of the  
2 Advisory Committee members, and we posted that. And we will  
3 be bringing that up now and I am going to turn it over to  
4 Mike to go through that table.

5 MS. MONAHAN: Can I make a comment while we are  
6 waiting for the next slide presentation to come up, which is  
7 this issue of communicating back to the Legislature,  
8 ensuring that we get continued funding, full funding, for AB  
9 118, and the importance of being able to message the  
10 successes of the program in a way that is accessible to the  
11 public, to the Legislature, to the Advisory Committee, and I  
12 am wondering if you have thoughts, if the CEC has thoughts  
13 about how to be able to present this information. And the  
14 suggestion is that goals, in terms of timing, of  
15 distributing the funding, and the issue that Bonnie raised,  
16 which is about actually having these tangible outcomes in  
17 terms of petroleum reduction, GHG reduction, available and  
18 advertised so that we can advocate on behalf of this  
19 program. I am just wondering if you guys have thoughts  
20 about how to communicate the story here?

21 MR. SMITH: Well, I think the point is a very good  
22 one, Patricia. We will begin discussions with the Senate  
23 and the Assembly Subcommittee staff, at least the Budget  
24 Subcommittee staff, on communications reporting to at least  
25 those bodies over at the Legislature. We want to get into

1 some sort of routine communication. Unfortunately, what  
2 has been happening, particularly as it applies to the ARRA  
3 funding that we sought, over a number of months there has  
4 been a great deal of uncertainty with respect to that  
5 funding, and so decisions by the Commission as to how we  
6 move money around in response to ARRA funding has been  
7 pretty much a real time process. It would have been  
8 absolutely impractical to notify the Legislature every time  
9 the Commissioners made a decision because DOE decided to  
10 fund or not to fund one of our projects that we were cost-  
11 sharing. So that created a good deal of uncertainty that we  
12 were wading through. We tried to express that clearly once  
13 all that information was known in the first Investment Plan  
14 that was released back in January, so all of that was laid  
15 out in a tabular form. The goals that you talk about also  
16 are laid out in the Investment Plan. Clearly, you know, as  
17 in just about everything that we do, no matter what we do,  
18 we can always do it better, or more effectively, or more  
19 comprehensively. And so we are learning - we are  
20 understanding where we need to fill some informational gaps,  
21 particularly with the Legislature and communication gaps,  
22 and we are working with - we will be working with them  
23 starting next week to develop a process where we routinely  
24 inform them.

25 VICE CHAIR BOYD: Mike, let me jump in here.

1 Commissioner Eggert and I have been talking, and Tim first  
2 gave us an opportunity with his caution to maybe discuss  
3 soliciting help from Advisory Committee members with the  
4 Legislature, and Patty just re-emphasized that. But I think  
5 the point here is, and we were just talking about where is  
6 the propitious moment in this agenda to beg your indulgence  
7 and plead for your help should it be needed, and it has been  
8 offered twice, so I think this is a good point in the agenda  
9 to have this discussion. I know the two of us agree 100  
10 percent with what we have heard, we are concerned about any  
11 money lying on the table, of course, in these tough times.  
12 We are concerned, therefore, that the message be out there  
13 what the goals and objectives of this program are and how  
14 they can address what we hope our goals and objectives of  
15 many people and many legislators. So I think what we have  
16 pretty well concluded we want to do is, a) ask you for that  
17 help, but it has been offered, b) yes, we need to prepare  
18 for you some information that you can use and that we  
19 collectively can use as leave-behinds, and the Legislature  
20 with legislators to help them understand the importance of  
21 the program, where it stands with regard to addressing those  
22 goals and objectives, and where it is going with regard to  
23 addressing those goals and objectives. And I guess there is  
24 a lot of concern about this program seeming to go slower  
25 than people envisioned, I think we said in the last meeting,

1 and I tried to hint in opening today that, you know, the  
2 economic stimulus efforts have been problematic, let's just  
3 say, 1) in terms of the demands on the staff of this agency,  
4 2) as we try to capture the advantages that program offered  
5 to parlay some of our money, and even more money for the  
6 state, and so there is a lot of explaining that needs to  
7 take place, and I would just turn to all the members and  
8 indicate, yes, we would graciously employ any and all of you  
9 who want to help us with explaining to folks, friend and foe  
10 alike, you know, where we are and what we are trying to do,  
11 and any unique advantages or unique opportunities that still  
12 are present for this state to pursue these kinds of  
13 activities which will, a) address our many many goals and  
14 objectives, environmental and energy, security and  
15 diversity, and secondly, all offer opportunities to  
16 stimulate business, create jobs, and what have you, in  
17 California. So a very good question, I think a good  
18 opportunity for us to take advantage of your knowledge and  
19 your investment now in this program. And we would like to  
20 link arms, you know; instead of standing there all alone, we  
21 would love to have you standing there with us as people are  
22 expressing their interest in the program. I will let it go  
23 at that. Commissioner Eggert, I do not know if you want to  
24 say anymore?

25 COMMISSIONER EGGERT: Actually, I think that was

1 perfect. And, again, in terms of us linking arms and  
2 requesting that assistance, you know, the types of  
3 information that you are suggesting, Patty, what form that  
4 should be in, sort of how could we be most helpful in  
5 providing that information, and in what form, and in what  
6 timelines and such, it would be very helpful to hear from  
7 you on that.

8 MR. EMMETT: One of - this is Daniel Emmett - one  
9 of the things we proposed in our joint letter was, in terms  
10 of meeting the goals of the program, posed being able to  
11 communicate on greenhouse gas and climate change and job  
12 creation metrics. Obviously, it is very very early in the  
13 program to do that, but one of the things that some of us  
14 had discussed was basically taking from any awarded contract  
15 or awarded proposals under the program, and my recollection  
16 is that they all have some at least best estimate of job  
17 creation and climate greenhouse gas benefit, and to be able  
18 to sort of take all those from awarded dollars and make an  
19 estimation in any way about, you know, these awards made to  
20 date should result in "X" number of greenhouse gas emissions  
21 and "X" number of jobs. Even if it is sort of looking  
22 forward, it is really saying, "We have identified these  
23 projects that have the potential to reduce greenhouse gas  
24 emissions and produce X jobs." So something like that which  
25 is relatively at the ready, still requires a fair amount of

1 leg work to pull it out of each of those awarded proposals,  
2 would be, I think, a useful tool in communicating the  
3 potential of this program to deliver the benefits and meet  
4 the goals.

5 MS. HALSEY: Um --

6 MR. HWANG: Can I -

7 MS. HALSEY: If I may, just from a workforce  
8 perspective, I would also be interested in understanding how  
9 we do a crosswalk between the Awardees and project start-up  
10 to the investment that the Commission is making in workforce  
11 training, so that we make sure we are really maximizing the  
12 return on investment. So, how do we work with our Grantees  
13 from a workforce development perspective, connect them with  
14 the proposals as they are being moved out, and make sure  
15 that we are doing a clear link to jobs being created and  
16 moving those people coming out of training programs into  
17 those jobs?

18 COMMISSIONER EGGERT: That is a great suggestion.  
19 I know one of the ways we did that through some of the other  
20 ARRA-funded project activities was to award points or use it  
21 as part of the solicitation scoring, which was whether or  
22 not they were planning on taking advantage of specifically  
23 the workforce development programs that were being  
24 established through your activities. And I do not know if  
25 we have done that as of yet in any of our solicitations, but

1 it might be something to consider for future ones.

2 MR. MIZUTANI: Currently, in the community  
3 colleges interagency, one of the activities, is to basically  
4 do a needs assessment which would be to assess what is out  
5 there and what the needs are, I guess, on a regional basis.  
6 In addition, that would be a good item to look at in future  
7 solicitations. But right now, we are not including that.

8 VICE CHAIR BOYD: This is a good discussion  
9 because I was thinking, as you just presented the quick  
10 summary of what we had done and what we are doing, there is  
11 of course reference to the workforce development component,  
12 but it dawned on me, and I am glad this came up now, that we  
13 maybe should have accentuated that in our opening, the fact  
14 that we have put so much emphasis on the front end of this  
15 effort and we try to marry what we are doing with the 118  
16 money, which offered us an extremely propitious opportunity  
17 to do that development workforce training, employment  
18 development. But as Commissioner Eggert had mentioned, who  
19 serves on our Ad Hoc Committee on ARRA monies themselves, we  
20 have got a lot of activity going there, and there is a  
21 crossover between the two and, yeah, in both talking to the  
22 public in general about the benefits and advantages of this  
23 program, and in particular explaining to the legislators  
24 what is going on here, this is one of the things that has  
25 been a big plus; while it may have taken away some from the

1 speed with which we could move in some of the more  
2 technical areas, with the mantra being jobs, jobs, jobs, and  
3 developing people for this future, and trying to accentuate  
4 green clean technology development, there was an early  
5 effort to do a lot of that, and we probably are not pointing  
6 that out enough, nor taking advantage of that fact because  
7 that is kind of the bottom line on what everybody is  
8 interested in. So when we talk in glib terms about economic  
9 development, we are not being specific enough about that  
10 which is going on, and it is really to the benefit and the  
11 credit of this program activity and the work of this  
12 advisory group, rather than a detriment to the program,  
13 perhaps, as some people are mistakenly interpreting it. In  
14 any event, Roland, you had your hand up.

15 MR. HWANG: Yeah, just a quick comment. First of  
16 all, this is a good opportunity to just express my thanks to  
17 the staff and to the Commissioners for responding to our  
18 letter and producing this table here about the distribution  
19 of funds, greatly appreciated. I think it is very helpful  
20 and, also, I just want to support Patty and Dan and others'  
21 comments about what kind of information we need from the  
22 Legislature. I am sorry that I was not able to attend the  
23 meeting, the subcommittee hearing last Wednesday and, while  
24 we are on this topic, I am wondering if it might be a good  
25 opportunity, I know Mike was there, I know Patty was there,

1 but I am wondering if this is a good opportunity to just  
2 very quickly, for those who were not at the subcommittee  
3 hearing, to go over what kinds of questions were asked, any  
4 kinds of concerns that were raised, or any other kind of  
5 debriefing that we can hear to better educate ourselves on  
6 what kind of information the committee was asking about. I  
7 know, Mike, I believe you were there, I know that Patty  
8 testified, I do not know if there were any take home  
9 messages from the Legislature on what we need to be doing  
10 better, any kind of concerns that were raised.

11 VICE CHAIR BOYD: Yeah, I think that is a good  
12 point. I know some of us were not able to be there. Mike  
13 was there representing us; I got some very positive  
14 comments, Mike, about the job that you did do. And, Roland,  
15 I might suggest that you might go through this list quickly  
16 and then come back while he is there and speak to those  
17 issues and points that the legislative committee, as you  
18 say, expressed interest in, or was looking for feedback in  
19 so that, a) we can understand that, and b) maybe we can  
20 prepare ourselves better for the next round of questions.  
21 So, Mike -- and two comments I want to make, 1) we have a  
22 representative from the Business Transportation Housing, why  
23 don't you introduce yourself?

24 MR. KAZARIAN: Karnig Kazarian, Business,  
25 Transportation and Housing Agency.

1                   VICE CHAIR BOYD: Thanks for being here, Karnig.  
2 And I just want to -- we got a note from Joe Norbeck,  
3 Professor Norbeck, who is a member of this group, and who is  
4 not here today, and it is because he has a serious back  
5 injury, and the note said he would call in and listen if he  
6 could, so I particularly want to express a welcome to Joe  
7 and sympathy as a fellow at this very moment back sufferer,  
8 I can appreciate what he is going through. My pain pills  
9 have kicked in, so I am feeling better. In any event, it is  
10 good to be here.

11                   MR. SMITH: Thank you, Commissioner. Let me  
12 quickly go through this. Actually, just while we are on the  
13 subject of the subcommittee hearings, I do want to express  
14 my thanks for Tricia's and Bonnie's presence at the  
15 hearings. Their input was very valuable, as was John Boesel  
16 attended at least the Assembly Hearing and provided some  
17 very valuable input. So we really appreciated the support,  
18 the show of support, by the Advisory Committee members. And  
19 I think Patricia points up the very sort of activity we need  
20 to continue in communicating with the Legislature.

21                   Okay, let me quickly go through this, but let me  
22 explain one or two things about this table. The left-hand  
23 columns represent the allocations that appear in the adopted  
24 investment plan that was approved by the Commission back  
25 last April. The funding activities -- well, actually the

1 column on the very right-hand side is the new revised, or  
2 modified allocations and these are based on decisions that  
3 the Commissioners have made to move dollars around in  
4 response to primarily ARRA funding. So we have made  
5 commitments to match ARRA dollars, so the revised  
6 allocations are partly in response to those redirections.  
7 We have made -- the Commissioners made redirections based on  
8 policy decisions unrelated to Federal funding decisions, and  
9 then, lastly, you will see there are some numbers that are  
10 fairly simple, and then you have got some numbers that are a  
11 long string of significant digits. And it is not meant to  
12 confuse anybody, but what we are mixing here is we are  
13 starting to get results from our solicitations and actually  
14 making dollar awards, and so we wanted to show as precise as  
15 possible the actual awards we are making, so you will see a  
16 mixture of numbers that have long strings of digits with  
17 fairly simple numbers that are still yet to be allocated, or  
18 at least awarded through solicitations. So that is the  
19 reason for that.

20 But let me just quickly start on the electric  
21 drive category, the plug-in hybrid retrofits. The  
22 Commission spent a little over \$600,000 with DGS to retrofit  
23 50 Priuses in the state fleet, converting them to plug-in  
24 hybrid drive, and that is the extent of what we are going to  
25 do there. The remainder of the money, the \$2.8 million, is

1 being redirected to support, to cost share the ARRA-funded  
2 projects for electric charging. We had several projects  
3 that we are funding, cost sharing with entities in  
4 California, and we needed additional dollars to make good on  
5 our commitment to cost share in those projects. So we moved  
6 the \$2.8 million into the electric drive category. So that  
7 left a modified allocation of \$612,000 for that category.

8           Medium- and heavy-duty demonstrations -- we  
9 started out with \$10 million, and I might also add on the  
10 non-road deployment, we started out with \$11.5 million, and  
11 I want to discuss these two together because, in the end, we  
12 combined the two. So the new allocation is pretty much very  
13 close to the original allocation of \$21.5. It was just  
14 administratively easier when we went out with our  
15 solicitation to combine medium- and heavy-duty, both on-road  
16 and non-road, into one solicitation. So the reallocation  
17 resulted in a fairly -- basically very little change from  
18 the original. Charging stations, we had \$12 million in the  
19 original investment plan, we had \$15.27 million, \$15.3  
20 million that we had committed for ARRA-funded projects, and  
21 this is where that \$2.88 up in the first category was  
22 redirected to support.

23           Going back up quickly to the trucks, of the \$10  
24 million, \$5 million is being used to cost share in, again,  
25 ARRA-funded demonstration projects that we received. A

1 million of that 10 went into the solicitation for medium-  
2 and heavy-duty trucks. And \$3.6 million of that 10 is going  
3 into the upcoming solicitation for the Center of Excellence.  
4 And the \$7 million should actually be \$6.6. We did not  
5 catch that correction, so that is \$6.6 million. And the  
6 balance of \$400,000 is being redirected again to support  
7 electric charging projects.

8           Non-road: \$8.5 million of this \$11.5 million,  
9 again, went into the medium- and heavy-duty solicitation  
10 that we are now in the process of evaluating proposals. The  
11 remaining \$3 million is going into the Center of Excellence,  
12 the \$6.6 million solicitation that is coming up shortly.  
13 So, again, the total number of dollars changed very little.  
14 The reallocations remained very completely consistent with  
15 the electric drive category, so we are very comfortable with  
16 those redirections. Electric charging, again, we started  
17 out with \$12 million and \$8.8 of it is being used to cost  
18 share, \$3.2 is being used in the infrastructure proposal for  
19 electric charging, that again, as Chuck mentioned, we are in  
20 the process of reviewing proposals. That left a gap, and  
21 that is where the \$2.88 million came in from our first  
22 category.

23           Manufacturing Facilities: We started out with \$9  
24 million and the Commissioners decided this is a very very  
25 critical function of this program and a very important

1 focus, and so we considerably increased the allocation for  
2 manufacturing vehicle and component manufacturing from \$9  
3 million to \$20 million. Of the \$9 million, again, \$1  
4 million is going into cost sharing with an ARRA-funded  
5 project that is producing and manufacturing lithium-ion  
6 batteries, and \$8 million is being used actually in the  
7 upcoming solicitation, or actually the solicitation that is  
8 out on the street now. The balance, in order to get up to  
9 \$20 million, is we moved money from the hydrogen category  
10 into this, so when the Commissioners decided to go from \$40  
11 million that was allocated, and I will get down to hydrogen  
12 in a second, but just to highlight or preview, when we went  
13 down from \$40 million to \$22 million that we have identified  
14 in the current draft -- in the plan as part of this  
15 solicitation, it left money that we could redirect into  
16 other categories. Part of that money went into this  
17 manufacturing category to bring it up to \$20 million. Any  
18 questions on electric drive before I go into Ethanol?

19 On the Ethanol category, E-85 fueling stations  
20 started out with \$5, we ended up with \$5. And you can see,  
21 again, part of it is being used to cost share in ARRA  
22 projects, and part of it is used in our current  
23 solicitation, infrastructure solicitation. The Ethanol  
24 producer incentive, this is new since the Investment Plan  
25 was adopted, so we added that category, but you can see it

1 was a zero allocation in the original Investment Plan. We  
2 have allocated \$6 million in the new allocation.

3           And in the next three items, the last two,  
4 Ethanol, and the first item under the biodiesel and  
5 renewable diesel category, much like the trucks, we lumped  
6 them together. Again, it was administratively easier for us  
7 to do that in going out with this solicitation. So what we  
8 did is we combined the Ethanol Project Feasibility Studies,  
9 the \$4 million that we allocated for new plants using waste  
10 feedstock to produce Ethanol, and the \$2 million that we  
11 allocated for new plants using waste feedstock to produce  
12 biodiesel or renewable diesel fuel. We combined them into  
13 one category, one grouping, one allocation of \$14.9 million.  
14 And that \$14.9 now is the basis of the solicitation that is  
15 on the street now for advanced biofuel facilities. So,  
16 again, we upped the number somewhat from a total of about \$9  
17 million up to \$14.9, but the categorization is completely  
18 consistent with the original Investment Plan categories.  
19 Any questions on Ethanol before I leave that?

20           MS. BAKER-BRANSTETTER: Where did the balance come  
21 from?

22           MR. SMITH: Pardon me?

23           MS. BAKER-BRANSTETTER: Where did the balance come  
24 from? You said it was an increase.

25           MR. SMITH: Yes, that came also from the hydrogen

1 money that was leftover.

2 MS. MONAHAN: Just a basic math question. I am  
3 trying to understand, to get to the \$14.9, you do not just  
4 add the numbers that are in the funding activities --

5 MR. SMITH: Correct. That gets you part of the  
6 way. So we have \$3 million and \$4 million and \$2 million,  
7 that gets you \$9 million, and the balance we brought in from  
8 hydrogen, the leftover hydrogen money. So we brought in \$5  
9 million from hydrogen to bring it up to \$14.9 million. And  
10 if you focus on the hydrogen category for a second -- and,  
11 in fact, let's talk about hydrogen now because that was the  
12 source of funding for several redirections. So we started  
13 out with \$40 million, we ended up with \$22 million that we  
14 were releasing in the solicitation to be released shortly.  
15 \$87,000, we are using as our dues for the fuel cell  
16 partnership, and then here is where -- the third bullet is  
17 where we redirected part of this money, \$5.46 million, into  
18 the advanced biofuel solicitation. \$11 million, we moved  
19 into the vehicle and vehicle component manufacturing  
20 solicitation. And \$1.45 million is being moved into the  
21 Ethanol Producer Incentive category that I pointed out  
22 earlier was created after the Investment Plan was adopted.  
23 I am going to jump back. Are there any questions on  
24 hydrogen? Otherwise, I am going to jump back and pick up on  
25 the --

1           MR. CARMICHAEL: I do have a question, actually.  
2 The decision to shift hydrogen funding at this time was  
3 driven by the fact that the matching opportunities from the  
4 Federal government really did not pursue or offer hydrogen  
5 match? What else is behind that decision?

6           MR. SMITH: Well, there were not any opportunities  
7 in the Federal solicitations for hydrogen fueling  
8 infrastructure. Secondly, though, but more importantly, as  
9 we demonstrated in our Draft Investment Plan that we  
10 released in January, and then that now we re-released  
11 recently, we are showing a decrease in the need for  
12 investment in hydrogen fueling infrastructure in order to  
13 match the vehicle roll-outs through 2012. So -- and it is  
14 all laid out in our analysis -- so those are the main  
15 reasons.

16           So going back just very quickly to the biodiesel  
17 renewable diesel, the last category there, the blending and  
18 storage terminals, \$4 million that we started with and we  
19 ended up with \$4 million, and that \$4 million went into the  
20 solicitation, the infrastructure solicitation that is on the  
21 street now -- or actually that we are reviewing proposals  
22 for.

23           MS. MONAHAN: Just a question. Do you want us to  
24 wait about our questions about the shifting in funding?  
25 Because I do not want to disturb the flow of your

1 presentation, but kind of responding to the question that  
2 Roland raised about some issues that came up, at least in  
3 the subcommittee around investment in Ethanol, some  
4 questions we have about whether that is appropriate for AB  
5 118 funding, I am wondering if you want to tackle that now  
6 while we are on the Ethanol section? Or if you would rather  
7 wait until the end of this?

8 MR. SMITH: Let me just quickly go through it and  
9 then we can take all those questions.

10 MS. MONAHAN: That is fine.

11 MR. SMITH: Thanks. Natural Gas -

12 VICE CHAIR BOYD: Emphasize the quickly, Mike.

13 MR. SMITH: Well, I can do it real quickly if I  
14 just stand here and you guys can peruse --

15 VICE CHAIR BOYD: Yeah, folks that had that  
16 information and are probably dying to ask questions, plus we  
17 are falling behind on the schedule some. Just do the best  
18 you can.

19 MR. SMITH: I will do my Federal Express  
20 commercial. Light duty vehicles: we started with \$2 and we  
21 ended up with zero. That money is moved to the Ethanol  
22 Producer Incentive. Medium- and heavy-duty vehicles, we  
23 started with 23 and we ended up with 12. The money was  
24 moved into match, well, about half of it was used to match  
25 ARRA projects, the other half was moved into the biomethane

1 solicitation. Fueling stations, we started out with \$8 and  
2 ended up with just about \$8 million. Biomethane Production:  
3 we started out with \$10 and we increased it substantially to  
4 \$21.5. So, again, except for the dollar movements, very  
5 consistent with the original investment plan. Propane:  
6 unchanged. Hydrogen: we have already talked about. Market  
7 Development: includes all the non-hardware activities of our  
8 program. Workforce Development: We started out with \$15 and  
9 we are remaining with \$15. Standards and Certification:  
10 Again, unchanged. Public Outreach and Education: This  
11 dropped to zero. Sustainability: Dropped to \$2 million.  
12 And our Technical Analysis, Environmental Market and  
13 Technologies, went down slightly. And the explanations for  
14 those reallocations are shown there.

15           So now, I am ready for questions.

16           VICE CHAIR BOYD: Well, I want to jump in and say  
17 something quick here because this can be a little confusing.  
18 And it may or may not answer questions -- it may not help at  
19 all, but where there are programmatic areas where events  
20 occurred that chose the Commission -- well, where the  
21 Commission chose to not pursue funding in the amount that  
22 was originally indicated in the Investment Plan, because of  
23 changes and things, things did not happen that might have  
24 happened, the money just kind of went on the table, you  
25 know, into the pile of money that we had other opportunities

1 to utilize. And so, when other programmatic areas were  
2 augmented, it was not necessarily that we took money away  
3 from hydrogen and put it specifically in a particular  
4 programmatic area, it is just that we had X dollars that  
5 were going unallocated, we had other programmatic needs to  
6 address, and the monies were just shifted to meet those  
7 needs. And I know hydrogen is controversial and you all  
8 will recall what we went through last year, we started out  
9 with \$6 million, I believe, in a draft plan, it went to \$40  
10 million in the final plan, and that \$40 million went before  
11 the Legislature, we were soundly abused over that amount of  
12 money, and language was put in the budget act to try to  
13 restrict us, which the Governor blue penciled, but in that  
14 interim we told the Legislature, "Look, we're going to go  
15 back and do a very thorough review." That was the number we  
16 came up with in accordance with the indications in the then  
17 available plan for hydrogen vehicle roll-out in California.  
18 We told the Legislature we would go back with ARB and do yet  
19 another more updated review of what might be the  
20 manufacturer's roll-out plans, we got that data, and I  
21 think, as Mike said, it kind of came out around \$22 million  
22 in the current plan period, not to talk at all about the  
23 future, and that left quite a bit of money on the table.  
24 And in a few other areas like natural gas light-duty  
25 vehicles, there was just no action there, etc. etc. So that

1 provided monies that were then allocated to newly  
2 identified, recently burgeoning areas of interest, and that  
3 is kind of how the decision was made. The staff, in trying  
4 to do the exacting accounting here has put, you know,  
5 dollars came from Column A to Column B, but I would urge you  
6 not to get too into that and just more concerned about why  
7 an area might have been reduced, or why an area might have  
8 been increased, not where the specific dollars came from.  
9 Enough said, okay. As Mike said, quick.

10 MS. MONAHAN: Can I come back to my original -- so  
11 at the subcommittee budget meeting that I was at, Ira Ruskin  
12 raised concerns around the investment in conventional corn  
13 ethanol, and this is a concern that we share in terms of  
14 this really moving us toward low carbon, sustainable fuels  
15 of the future. So I would like to have some discussion  
16 around that and hear what CEC's view is on this.

17 MS. HOLMES-GEN: Can I just add to the question --  
18 this is Bonnie -- that this also came up in the Senate  
19 Subcommittee Hearing as of concern, and I think that this is  
20 a big issue that needs to be dealt with in terms of  
21 continuing the ongoing support of the Legislature for this  
22 program.

23 MR. COLEMAN: Can I ask a quick question? What do  
24 you mean by investment in conventional Ethanol? Can you  
25 point to which specific program?

1 MS. MONAHAN: It is the new \$6 million program.  
2 As far as I know, and perhaps we need some clarification on  
3 this, that is the only investment in conventional corn that  
4 CEC is anticipating, at least with the current \$175 million?

5 MR. SMITH: That is correct.

6 VICE CHAIR BOYD: Well, let me try to save the  
7 staff from the agonies of trying to explain this. You know,  
8 we have heard a lot about the fate of jobs in California,  
9 the fate of certain facilities in California that hired  
10 people that had to shut down, that were providing jobs in  
11 California. We also know about the carbon footprint of  
12 various fuels, including corn ethanol. And quite frankly,  
13 there have been lengthy discussions about that issue. One  
14 of the concerns that we have as an agency is that the  
15 Federal RFS forces upon this nation a huge amount of  
16 Ethanol, and California is obliged to comply with its fair  
17 share, let's just say, of Ethanol in the future. Ethanol in  
18 the near term, and well into the future, is going to be a  
19 big piece of that alternative fuels pie that we are trying  
20 to address, and corn Ethanol, like it or not, you know, is  
21 going to continue to be a big piece of that because of the  
22 Federal RFS. And then you start debating about facilitating  
23 jobs in California over the short term, and providing  
24 Ethanol from corn, admittedly, but doing it in California,  
25 providing a few jobs, providing the tax revenue to

1 California from the fact that the facilities are here, or  
2 just in getting the corn ethanol from the Midwest. I mean,  
3 we kind of concluded it is going to come, like it or not,  
4 and it is going to come from corn, like it or not, and when  
5 you start going through the footprint of corn ethanol tanker  
6 car'd in here from the Midwest vs. that, in that process,  
7 the mash is dried using immense amounts of heat produced by  
8 either coal or other sources vs. in California the  
9 distiller's grain, if you want to call it that, is not  
10 dried, even it is provided immediately in wet form to  
11 California agriculture, you know, California produced  
12 ethanol does not seem to be all that bad if you have to  
13 accept the fact that you are going to have corn ethanol,  
14 like it or not. Therefore, we, the staff, did the Herculean  
15 task of figuring out a very complicated program that would  
16 facilitate the possibility that we could continue to produce  
17 corn ethanol in California at what we think is probably a  
18 slightly better footprint of, then, the ethanol totally  
19 produced in the Midwest and brought to California, and that  
20 program was full of all kinds of caveats and conditions  
21 about repayment of the money and transitioning to another  
22 base, a cellulosic base in the not too distant future for  
23 the production to come out of California plants, so after  
24 going through all the agony and ecstasy of that over a long  
25 period of time and trying to figure out ways to address the

1 extreme interest of lots of folks in California employment,  
2 the staff has ended up with the recommendation that  
3 Commissioner Eggert and I and, ultimately, we think the full  
4 Commissioner will endorse for kind of walking the tightrope  
5 and providing a program in California that may produce some  
6 jobs, may produce some revenue, and will produce Ethanol  
7 that we think is a tad bit cleaner, while we do address the  
8 obvious goals of our many agency plans in this state that  
9 call for, you know, the greenest possible, the cleanest  
10 possible alternative fuels. But if you accept the fact that  
11 there is going to be an awful lot of ethanol, an awful lot  
12 of corn ethanol, we thought that was better than just  
13 sitting here and taking tank carloads of ethanol from the  
14 Midwest far out into the future. So we put conditions about  
15 repayments of the money should there be certain profit  
16 margins reached, and conditions on converting the facilities  
17 in a stair-step fashion to different input sources. We  
18 thought that was ultimately the best deal we could get, and  
19 that is kind of why there is this program now. We did not  
20 take money away from another program, it is kind of hard to  
21 resist the pressure not to create a program when it was  
22 known there was, you know, money in our reserve account,  
23 better we spend it on these types of programs than get it,  
24 as Tim pointed out, taken away because it is sitting there  
25 not earmarked for something positive in California.

1 MS. MONAHAN: Could you clarify the expectations  
2 around a transition to lower carbon, presumably cellulosic  
3 ethanol? I do not know what the details are in terms of the  
4 expectation.

5 MR. HWANG: Yeah, and just to add to that, I mean,  
6 it might be good -- I do not believe the solicitation is out  
7 on the streets yet, so just to clarify maybe when the timing  
8 of that solicitation might be, and also could I presume it  
9 will be out before the next Advisory Committee meeting? But  
10 also to describe perhaps what the criteria are involved, how  
11 much money per facility we are talking about, details of  
12 that nature and also maybe just describe what the status of  
13 the decisions on finalizing the solicitation is at, so is  
14 there still a chance to kind of influence such?

15 VICE CHAIR BOYD: Mike, do you want to respond?

16 MR. SMITH: Sure. We had a workshop yesterday on  
17 this program. We are doing this solicitation, if you want  
18 to call it a solicitation, since there is basically three or  
19 four entities that could apply. Our PON will probably be  
20 going out in maybe two to three weeks. The due date for  
21 applications, it is basically going to be a very simple  
22 application process. The existing ethanol producers can  
23 apply. The program is set up in such a way that it is not a  
24 productive incentive to produce, it is more of a safety net  
25 in the event that economic or market conditions work against

1 California ethanol producers. It is important to keep in  
2 mind that these producers, while they have been idle for the  
3 last year or so, against the backdrop of the economic  
4 conditions in the Midwest, where the corn producers, the  
5 ethanol producers in the Midwest have not been idle. So  
6 again, as Commissioner Boyd was stating, as long as we are  
7 going to be using massive amounts of ethanol, going into the  
8 future, we might as well take whatever steps we can to  
9 produce it here and to produce it in a more cleaner fashion,  
10 and I would not be so shy about the differences between corn  
11 ethanol produced here in California and that produced in the  
12 Midwest. The greenhouse gas footprint is considerably more  
13 than a tad, if you pardon me for saying so, Commissioner, we  
14 are happy to grab a 15-20 percent reduction in greenhouse  
15 gas emissions here in California when we can do it right  
16 now, and all they have to do is turn their plants on and  
17 start producing. The ethanol that flows into the market,  
18 that comes from those plants, is considerably cleaner from a  
19 greenhouse gas standpoint. We also have to keep in mind  
20 that these plants represent about a half a billion dollar  
21 investment in California's economy, and it does not make any  
22 sense to us, at least to staff, to leave those assets  
23 stranded when they could be producing cleaner ethanol,  
24 creating jobs, taxes, etc. So the safety net is more to  
25 provide funding if market conditions such that we have seen

1 in the last year return, and work unfavorably to California  
2 ethanol producers. Now, it is set up in such a way that, if  
3 this crush spread that we have defined in the program drops  
4 below a certain price, then ethanol producers receive a  
5 certain payment for every gallon they produce. And we have  
6 set the program up in a way that there will be a maximum of  
7 \$3 million per producer. If the crush spread goes above  
8 that price, they receive no payments, and if the crush  
9 spread goes above a proscribed price, an even higher price,  
10 then they begin repaying the money to us. Now,  
11 participation in this program is quite contingent upon the  
12 producers committing to a five-year program to convert their  
13 facilities, so that they either significantly reduce their  
14 greenhouse gas operational footprint, or begin producing  
15 ethanol from waste material. So we see this as an  
16 opportunity not only to preserve very significant  
17 investments in California, to recreate employment, and all  
18 the economic benefits associated with that, but also to use  
19 these plants as a platform, to move them into a lower carbon  
20 operational, or a lower carbon production circumstance.

21 MR. COLEMAN: I have a comment if this is a good  
22 time for it.

23 MR. SMITH: Please.

24 MR. COLEMAN: So New Fuels Alliance has ethanol  
25 people in it, as people know, and I am going to bite on this

1 and take a swing at why it makes sense. So I have a  
2 different perspective. I appreciate the Commissioners  
3 stepping forward on this, I appreciate the analysis, the  
4 rational analysis of what is going on in the marketplace, I  
5 want to commend CEC staff for putting together what I think  
6 is not only something that has almost been described as a  
7 necessary petroleum reduction approach to something that is  
8 much bigger, and I think it is actually a model that should  
9 be moved into other sectors because I think if you look at  
10 what is going on in this program, I think you will find  
11 exactly what we are looking for. You have petroleum  
12 reduction, immediately tangible low hanging fruit --  
13 petroleum reduction because of the steel in the ground. The  
14 steel that is in the ground is the most modern version of  
15 what is going on in the bio-refining space. It is a starch  
16 facility, people are too obsessed about what type of  
17 feedstock goes into it; this is the same type of facility  
18 that another one of our members uses in Virginia to convert  
19 winter barley into ethanol with a 60-70 percent carbon  
20 reduction, and so you have got to look at these facilities  
21 as potentially integrated. And then, if you look at the  
22 specifics of this program, the biofuels industry sat down  
23 with CEC and basically said, "What do you want?" And they  
24 agreed to a set of conditions that I think is quite  
25 incredible. They agree to only take the money if they are

1 in trouble, they agree to pay the money back if they were  
2 making too much money over the crush spread, and I do not  
3 know if there are too many programs like that, they agree,  
4 if they get the money, they have to either further reduce  
5 their lifecycle GHG score from the already 15 percent to  
6 roughly 25 percent better than gasoline, so these are  
7 existing commercial facilities that are already 15 percent  
8 better and are willing to go to 25 percent, or, in the  
9 alternative, significantly diversify their feedstock. So  
10 that is the tangible thing. They have got to go buy other  
11 things other than corn, and they have that choice -- and it  
12 is good to give them that choice because we do not know what  
13 the realities of that choice down the road are. But I think  
14 if you look at this model, it is a classic example of CEC  
15 staff looking at realities, the biofuels industry saying,  
16 "We know you want us to get better," and then going and  
17 doing it. And you know, when I see the full suite of things  
18 that this program is trying to achieve, not, "We hate corn,"  
19 but petroleum reduction, carbon reductions, jobs, this is a  
20 no-brainer, from my perspective. And so, as a member of  
21 this Board, that is what I am going to throw out, but I have  
22 a different perspective. I think CEC did a great job on  
23 this.

24 MR. HWANG: Just a question of Mike. This will  
25 provide a little more details on how this program might

1 work. I guess I am a little confused on the \$3 million, I  
2 guess, 1) maybe you can enlighten us a little bit, \$3  
3 million per year, I think, on a facility like this does not  
4 seem like a whole lot of money, so just a lack of clarity in  
5 my mind how this \$3 million really affects their ability to  
6 reopen the plant; second, on this five-year program  
7 commitment, I guess I am not clear really what is the  
8 mechanism for which we will be able to recover the money  
9 down the road, you know, what exactly are the conditions?  
10 And, again, I am a little curious because the \$3 million  
11 ultimately does not seem like a big - if that is what per  
12 year they are receiving, it does not seem like a big penalty  
13 if, indeed, they decide five years down the road they are  
14 not going to make the investments that they have committed  
15 to. So I am just wondering because it does seem like a big  
16 part of this program is to ensure that we can make this  
17 transition. And, you know, just as kind of a way of  
18 background here, of course, the NRDC has been supporting the  
19 use of biofuels and ethanol in this country and  
20 accelerating. We want to move away as rapidly as possible  
21 from corn ethanol, we think that corn ethanol can be  
22 improved, and we think corn ethanol in theory also can  
23 provide a pathway in a sense to a lower carbon, cellulosic-  
24 type biofuel future. However, I guess I would say, given  
25 some recent developments in this challenge of transitioning

1 the ethanol industry, we have quite frankly been a little  
2 bit discouraged about our ability to influence this  
3 trajectory of how do you move beyond corn ethanol. So I  
4 think this program is a great example, I think, what their  
5 intentions are, I think, right on in terms of let's help  
6 this industry move beyond the current practices and move  
7 into a much cleaner, much more sustainable process.  
8 However, I think the challenge you have always had is how do  
9 we actually make that occur. How do we develop programs and  
10 strategies and incentives to effect that transition because  
11 every time we turn around, it seems like we are having a  
12 hard time moving forward with the right kind of stuff that  
13 we are looking for. So, again, and particularly this  
14 penalty, this penalty does not seem very large to me, it  
15 does not seem like we are going to -- if the penalty is  
16 simply to repay the money, it does not seem to me like that  
17 is going to be necessarily in terms of to factor whether the  
18 actual investments which are a hundred times larger, I would  
19 assume, to make this greenhouse gas reduction with the waste  
20 materials a reality. It does not seem to me like the  
21 penalty is commensurate with the kind of investment which we  
22 are talking about. So maybe just a little better  
23 description for how this might work.

24 MR. SMITH: Well, I am going to take a very quick  
25 stab in answering your questions, and then I am going to

1 introduce Gordon Schremp, who has been instrumental in  
2 putting the design of this program together. But let me  
3 first start by saying that any difficulty that the industry  
4 has been facing to transition certainly must be viewed in  
5 the context of the fact that the industry has not been  
6 operating. So we have to have operational plants in order  
7 to transition them. They are looking at surviving. I know  
8 from a public policy standpoint, we have broader goals of  
9 transitioning them to a different feedstock or a different  
10 operational mode, so the carbon intensity is much lower.  
11 Right now, they are looking at, "Okay, how do we get the  
12 plant operating again? How do we even start producing?"  
13 So, as a safety net, the money is not necessarily -- it is  
14 not being used to get them restarted, so we are not  
15 providing the dollars to them to re-start their plants, they  
16 are going to have to do that on their own. Once their  
17 plants are operational, then this safety net program, should  
18 they sign up, the safety net program functions to provide --  
19 and we recognize that it is just \$3 million per facility,  
20 and you are absolutely right, Roland, that is not a large  
21 sum of money, but it is something, and it is meant to  
22 provide as much a mechanism to at least bring some level of  
23 solvency should ethanol market conditions go sour again, but  
24 also to provide a certain amount of confidence to the  
25 investment and banking communities that these plants -- the

1 state recognizes the value of these plants, and the state  
2 is willing to stand behind them to a certain degree should  
3 market conditions for ethanol change. So, again, it is not  
4 meant to provide money up front for them to get started, it  
5 is meant simply as a safety net. And I am going to ask  
6 Gordon to step up and he can explain the milestones, but  
7 should they put themselves on this trajectory, this couple-  
8 year trajectory, if they miss a milestone, they repay the  
9 money. Now, granted, you used the characterization "it is  
10 not a large penalty," and you are right, but it does come  
11 back to the program and we can re-use it in another fashion;  
12 at least it is an attempt by the Energy Commission to employ  
13 a strategy that has not been used before. And so we are  
14 willing to take that gamble, it is not a large sum of money,  
15 and it may just do the trick. Gordon?

16 VICE CHAIR BOYD: Gordon, I am going to ask you to  
17 be pretty brief. I do not want to turn this Advisory  
18 Committee hearing into a workshop on how to design the  
19 program, the workshop was yesterday. But I want to be  
20 responsive to the concerns of the Advisory Committee  
21 members. But bear in mind, without this program -- and, you  
22 know, I do not think -- I was not at the workshop, I was  
23 somewhere else, but I doubt if this went down that easy with  
24 the industry and it is a compromise, I think, and a fairly  
25 significant one on the part of an industry that probably

1 came in the door originally just asking for a hand-out to  
2 keep them afloat. The consequence of not having this  
3 program is to gamble on, fine, we will just live with  
4 Midwest corn ethanol until such time as the technical and  
5 scientific community and the investment community delivers  
6 enough technology and science to make the cellulosic  
7 ethanol. I am beginning to rank cellulosic ethanol  
8 technological advance along with my lifetime of waiting for  
9 battery technology, etc. etc., so, I mean, no risk, no  
10 reward, no gambles, no progress, and we probably have a  
11 program here that obviously is not making anybody happy and  
12 maybe that is the best we can do. But, in any event, I  
13 appreciate the concerns and questions of everybody here. I  
14 would love nothing better than to get off of corn ethanol as  
15 fast as we can. But if you look at the Federal mandate, and  
16 it is not going away, if you look at the amount of ethanol  
17 we have to have in our base gasoline, and if you look at the  
18 ambitious plans of this Advisory Committee and the  
19 Investment Plan and the ARB and ourselves to, okay, let's  
20 get the E-85 out there, then, into these Flexible Fuel  
21 Vehicles to the maximum extent feasible, you have got to  
22 have the ethanol. And we kind of think it is better to have  
23 it done here with the conditions that have been laid out  
24 than the other options, which are a big risk on just living  
25 with Midwest imported ethanol, and that does nothing for the

1 country in terms of even weaning them away from a lifetime  
2 of corn ethanol in the ethanol business in the United  
3 States. So, anyway, Gordon? Quickly.

4 MR. SCHREMP: Thank you, Commissioner Boyd.  
5 Gordon Schremp, Senior Fuels Specialist on staff at the  
6 Energy Commission. Just want a quick two comparisons,  
7 Roland, as part of my answer to your question. This program  
8 is quite unique as I think Brooke and Mike Smith explained.  
9 Many of the programs in the United States have a provision,  
10 states have provisions, to pay ethanol producers just for  
11 operating, and they get lump sums of money, or sums of money  
12 per production. This is not that kind of program. None of  
13 those other programs have a repayment provision, this  
14 program does. This program, as Mike Smith characterized, is  
15 designed to be a stake under specific unfavorable economic  
16 operating conditions for ethanol plants. They are currently  
17 unfavorable, that is why facilities have not come back into  
18 operation in California at this time. We expect, as time  
19 goes by, demand for ethanol from these facilities will be  
20 increasing under the Low Carbon Fuel Standard. They have a  
21 lower carbon footprint and their ethanol will be more  
22 valuable. So unfavorable conditions now, more favorable in  
23 the future, directionally speaking. So that is why we have  
24 a program designed to be a safety net only, but importantly  
25 for taxpayers, a repayment provision as part of this overall

1 CPIP. In addition to that, there are other requirements,  
2 no other programs like this are in existence, and that has  
3 already been adequately described by Brooke, a means of  
4 reducing their environmental footprint. So that, you say,  
5 "Well, that is going to be a lot of money," true, that will  
6 be a lot more money than the \$3 million, but the money is a  
7 safety net, not seed money to try to reduce your carbon  
8 footprint or diversify your feedstock, that is sort of a  
9 requirement to stay in the program. So if you want to play,  
10 you want to have a safety net, that is what this program  
11 does, but there are catches, and the catches will require  
12 capital. Three years after you are into the program, you  
13 have to have permits in hand; four years, you have to begin  
14 construction. So, to stay in the program, to be eligible  
15 for payments in the future, you have to make these  
16 investments and we do recognize they are much more than \$3  
17 million. So there are marked differences in this program,  
18 it is unique, and there are multiple, I guess, pathways we  
19 are trying to get these plants to go on that are different  
20 than they are today, recognizing they are, as Brooke said,  
21 better than the traditional corn facilities in the United  
22 States. Does that address your question a little bit  
23 better, Roland?

24 MR. HWANG: Yeah, that is very helpful and,  
25 Commissioner Boyd, just to beg your indulgence, one point of

1 clarification, penalties only accrue if you opt into the  
2 program, so how fast is the process to opt into the program?  
3 Basically, can they say, "We are not in the program," and  
4 keep that in reserve, but then point to the program, to  
5 their potential financiers, then again quickly jump into?

6 MR. SCHREMP: Once the program opportunity notice  
7 hits the street, the ethanol producers or leasers of the  
8 plants in California may apply, but to submit information  
9 proving they are a plant of a minimum capacity, they would  
10 ultimately have to enter into a contract that have all the  
11 terms and conditions, the details by which the program  
12 operates, and their obligations not only for reimbursement  
13 to the state, but also those obligations under the  
14 operational enhancement goals for the bio-refineries. So  
15 all of that will be clearly stipulated in what they need to  
16 do, so that could be done rather quickly, that is probably a  
17 30-day process once the information comes into the  
18 Commission following the release of the PON, and then enter  
19 into a contract and have that signed and approved by the  
20 Commission and all parties involved. So, ultimately before  
21 this gets up and running, I do not know, this is probably a  
22 couple months off ultimately until people could be into the  
23 program. And once again, as has been pointed out, you have  
24 to be operating obviously to receive a payment under  
25 unfavorable operating conditions, not be idle.

1           MR. HWANG: Is this solicitation going to have a  
2 limited window and will we continue to see this in 2011 and  
3 2012, or is it just a one-time offer, essentially? And do  
4 you have to sign up, given a program, or not?

5           MR. SCHREMP: Once you are into the program, there  
6 is money that has been identified, \$6 million as has been  
7 discussed. Future monies? Those are future decisions.  
8 There is an annual opportunity for the Commission to  
9 allocate funds for various types of program opportunities.  
10 So those would be a decision, Roland, every single year, and  
11 to be seen how much money is committed in future times, how  
12 much money may be necessary. To your question about when  
13 people would be coming into the program, if you are not a  
14 facility that is currently operating and you are in  
15 bankruptcy protection, maybe you do not apply right away and  
16 maybe there is a delay before you initially do get into the  
17 program, that is also possible.

18           MR. HWANG: Okay, thank you.

19           MR. SCHREMP: You are welcome.

20           VICE CHAIR BOYD: Roland, a quick comment about  
21 the fact that it is not a lot of money, it is not a lot of  
22 money, however, there is an assumption there that evidence  
23 of a state provided safety net that could help ensure  
24 continued operation of a business probably gives that  
25 business leverage to go out into the private financial world

1 and get the real revenue, the real capital they need if  
2 they need it to sustain their operation. So, again, yes, we  
3 are not offering a lot of money, but we are kind of throwing  
4 a lifeline out that sends some signals, we think, to the  
5 financial community that some of these folks probably have  
6 to raise the capital they need for the future, and certainly  
7 whether they are going to need to raise capital to pay the  
8 conversion cost. It is true, if somebody does not join in a  
9 program, they are not subject to all these conditions, but  
10 it appeared to us that the lions share, if not practically  
11 all, of the potential applicants to this need that safety  
12 net. If somebody does not, then they can operate as they  
13 choose to operate, but I trust the Low Carbon Fuel Standard  
14 Program over time will force consciousness about the  
15 footprint of a person's product if they want to sell it into  
16 that market as a whole, that it is going to have to start  
17 reducing its footprint, as well.

18 MR. HWANG: Assuming it survives the litigation.  
19 But getting back, I think this is a really key point because  
20 I think my confidence in this program would certainly be  
21 greatly enlarged if we have confidence that we have  
22 appropriate incentive structure to get the investments in  
23 place. So the \$3 million seems to be not commensurate with  
24 the type of capitalization you need for the kinds of plants  
25 we would like to see, this movement. So has there been any

1 thought towards not just returning the money, but actually  
2 paying a penalty if you do not abide by your contractual  
3 commitments to make these investments and hit these  
4 milestones? Obviously, as you know, Commissioner Boyd, you  
5 were formerly at the Air Board, and the penalties associated  
6 with the Air Pollution Programs are designed in a way to  
7 ensure that the incentive is to comply, rather than to pay  
8 the penalty, so I am just wondering if there has been  
9 thought about greater than \$3 million, or whatever, the  
10 return of money to the state? I am just trying to get the  
11 payment structure --

12 VICE CHAIR BOYD: I think there were thoughts to  
13 that and I think where it came out was a kind of a  
14 conclusion that there be no -- we wanted a carrot, an  
15 incentive, not a gun at their head, and I think it was the  
16 staff's conclusion, concurred then by the Commissioners  
17 eventually, that the program as designed was in that  
18 delicate balance area where it probably would work. I think  
19 there was a conclusion that, if we went beyond the incentive  
20 penalties, so to speak, to pure penalty, nobody would  
21 probably even partake of the program and we would gain  
22 nothing. So risks, rewards. We are taking a risk in  
23 providing three years worth of money before, as indicated by  
24 Gordon, there is a major commitment necessary and investment  
25 commitment. But it appeared that it would take that to keep

1 this process moving forward and people came in originally  
2 wanting to replicate, as Gordon said, the type of program  
3 that is provided in other states where you just flat out get  
4 a production incentive, period. Your thought is well taken,  
5 I understand it well, we think we came up with the best  
6 balance we could get under the circumstances, vs. just  
7 saying, "Sorry, we can't do it," and Bingo, we fall back to  
8 almost 100 percent Midwest corn.

9 COMMISSIONER EGGERT: And I would just add, I  
10 mean, there is the Low Carbon Fuel Standard policy  
11 constraint as was previously mentioned and, again, assuming  
12 it survives litigation, that is going to be an ongoing  
13 pressure on these facilities and on, of course, all  
14 producers of fuel in the state, to produce the lowest  
15 possible carbon intensity. So you would expect that might  
16 play a factor in this.

17 MR. COOPER: Is there a queue for speaking? I  
18 just have a point to make, that I believe this issue, the  
19 Ethanol issue, does raise a larger question about the role  
20 of the Advisory Committee and the role of the Investment  
21 Plan in setting some type of accountability standards for  
22 the funding, given that it is a multi-year program, that  
23 there may be grantees that wish to come back for funding in  
24 future years, and I think that we do have a role to play in  
25 placing some language into the investment plan that would

1 require more information, more accountability to prove that  
2 greenhouse gas emissions have been reduced from your  
3 program, that jobs have been created, and I would be willing  
4 to work on some language to circulate with regard to that  
5 accountability language. But I just do not want this  
6 opportunity to go by without that being considered, given  
7 the large amount of money involved, given the state of the  
8 economy in California, and our opportunity at the same time  
9 to reduce greenhouse gas emissions.

10 MR. SMITH: Tim, did you have -- you and Patricia  
11 had your hands up.

12 MR. CARMICHAEL: I want to talk about something  
13 other than ethanol, so I am going to let Patty go first.

14 MS. MONAHAN: 'Cause all I talk about is ethanol.  
15 I want to thank the staff for that explanation, actually  
16 that was very very helpful. And I think as we talk about  
17 changes to the current -- to the next round of the  
18 Investment Plan, I am hoping staff can talk more  
19 specifically about whether you see an extension, and in the  
20 language that I read, I do not really see this. It seems  
21 like this is a one-year proposition, but perhaps the  
22 language is nebulous enough in the 2010-2011 Investment Plan  
23 that you see that opportunity, so it is something I am  
24 hoping we can talk about. But it has been very helpful, and  
25 we do agree that corn ethanol is here, and it is not going

1 away, and if we can make it cleaner, we should. We see  
2 more the opportunity there Federally in terms of realignment  
3 of the tax incentives, rather than just getting a dollar per  
4 gallon, why don't we base it on performance? And that is  
5 something we will be advocating for Federally and something  
6 we would like to speak with Brooke about and others. But I  
7 think that whether our investment in AB 118 should be  
8 directed towards that end is something that we have some  
9 questions about. But we definitely see the need for  
10 performance-based ethanol and, if we can make corn ethanol  
11 cleaner, we should. So I thank the staff for their  
12 thoughtfulness on their proposal.

13 VICE CHAIR BOYD: We kind of hope it is a model,  
14 but we are not a corn state, we do not have the clout at all  
15 of the Midwest in this debate about ethanol. I am sure Tom  
16 and I can remember the good old days of splash blending of  
17 Ethanol, and I have the privilege of being personally  
18 threatened by Senator Dole of Kansas over California's  
19 strong stance on ethanol. He was going to call his good  
20 friend, then Governor Wilson, etc. etc. So hopefully the  
21 California model offers an opportunity for other folks to  
22 think about it, and maybe modify it on a broader scale.  
23 But, again, I think we have done what we can do more or less  
24 with our limited influence on the corn business.

25 MR. SMITH: Bonnie, did you want to talk more

1 about this?

2 MS. HOLMES-GEN: I did. And I wanted to say that  
3 I appreciate all this discussion, too, it is very very  
4 helpful, and it still seems to me, you know, as you said, it  
5 is a risk, it is a stretch here, I mean, this is a program  
6 that is to advance the state's leadership in the cleanest  
7 technologies, and five years does seem like a long time  
8 before we get to the commitment for the second generation in  
9 the more sustainable fuels.

10 VICE CHAIR BOYD: I see it as a three-year  
11 commitment.

12 MS. HOLMES-GEN: Okay.

13 VICE CHAIR BOYD: There is a threshold there.

14 MS. HOLMES-GEN: There is, and I want to, first of  
15 all, second the comments about accountability and really  
16 showing that we are getting this GHG reduction. That is  
17 part of what is promoting, considering this as a near-term  
18 investment. And I also wanted to ask, has there been any  
19 discussion, or is there anything built in about air quality,  
20 you know, looking at requirements for these facilities to  
21 reduce pollution emissions, reduce the trucking emissions,  
22 cleaner diesel, other technologies, other ways to reduce  
23 their pollution emissions in the community? Because that  
24 would be another way, I think, that would be much more in  
25 line, again, with the objectives of 118 if we are looking at

1 GHG and air quality benefits that could be achieved.

2 VICE CHAIR BOYD: Go ahead, Tim. Rescue me.

3 MS. HOLMES-GEN: Can you at some point give me  
4 your thoughts or --

5 VICE CHAIR BOYD: Well, I mean, this agency is  
6 equally concerned, along with ARB, about air quality and  
7 public health. And this is an agency that is deeply steeped  
8 in CEQA as a result of the power plant siting  
9 responsibilities we have and the people we have that  
10 dedicate themselves to all the various environmental factors  
11 involved, so I think we are quite conversant with that. We  
12 also are quite aware that there are air quality districts  
13 and rules and regulations in this state to push industry  
14 pretty hard, that they are going to have to meet those  
15 regulatory requirements of the districts in which they  
16 operate. And so, no, we did not go for an extraordinary,  
17 and I think that is something worthy of debate, but maybe it  
18 is worthy of debate if these people get back on their feet  
19 at all with regard to any future rounds, but we have not  
20 promised any future rounds. So, I mean, I think that is the  
21 best I can say at the moment relative to that.

22 MS. HOLMES-GEN: Well, I just wanted to consider  
23 it seems like there is still some time to consider that in  
24 terms of either an immediate or a built-in condition over  
25 the five years of the facility.

1           MR. SMITH: Commissioner, I might add that the  
2 notion is worthy of debate for all facilities. I do not  
3 think that singling out corn ethanol facilities for a  
4 different sort of treatment is fair, generally, or within  
5 equitable bounds, certainly within this program. If we are  
6 going to do that, we need to look at those same -- apply the  
7 same principles to all facilities, advanced biofuel and the  
8 like, that are funded out of this program. Again, I keep  
9 going back to the fact that, if this program - in the worst  
10 case, the plants will shut down and we are burning ethanol  
11 that is dirtier; in the second worse case, the plants  
12 operate without our funding and we get cleaner ethanol. So  
13 I do not see how penalizing facilities, treating these  
14 facilities differently, from a public policy standpoint, or  
15 a funding criteria standpoint, in any way advances the  
16 equity goals or principles of this program.

17           MR. COLEMAN: And one more, if I may, just take  
18 two seconds, and one more point that spins directly off of  
19 that is, is it a concept that makes sense if you are trying  
20 to derive change? Right? If we use 118 as a vehicle to  
21 screw down tighter on all of the alternatives that we are  
22 trying to drive into the marketplace, are we are not  
23 screwing down tighter on the status quo in those categories?  
24 Are we driving change? I mean, I do not think we are. It  
25 does not mean we should drive air pollution, but I do not

1 think it works as a concept to do that for anybody, at the  
2 risk of being controversial.

3 MR. SMITH: We are already seeing, at least in one  
4 case, one facility will be using biomethane produced from a  
5 dairy that is located close by, that we are actually funding  
6 as part of the biomethane awards that we are making, so they  
7 will be displacing up to about 13 or 14 percent of their  
8 natural gas use with biomethane. So we are already seeing  
9 these facilities, I mean, they are showing strong interest  
10 in changing their operational mode, as well as changing  
11 their feedstock. And, again, another facility, at least one  
12 other facility, maybe two facilities, are already interested  
13 in integrating systems into their plants that will allow  
14 them to use a different feedstock, and it is not going to be  
15 immediately 100 percent conversion, but it is going to be a  
16 gradual conversion, and that is just the way it is going to  
17 happen, and that is why we set it up for a several-year  
18 effort. So we are already seeing this interest. Treating  
19 these plants differently, I do not think, is in the best  
20 interest of this program.

21 VICE CHAIR BOYD: Tim.

22 MR. CARMICHAEL: Three quick points. I just want  
23 to emphasize that a legislative committee hearing, even a  
24 subcommittee hearing is possibly the worst venue to have an  
25 educational conversation. And it makes sense, again, for us

1 collectively to go to the Legislature and meet with  
2 individual members and staff in advance of any committee  
3 hearings, so questions can be asked, rationales can be  
4 explained, where you may not have that opportunity in a  
5 committee hearing, or the staff may not have that  
6 opportunity in a committee hearing. The second point is, I  
7 was not aware of the workshop yesterday and I do not know if  
8 there is a mechanism in place to make committee members  
9 aware, or panel members aware, of all of the workshops that  
10 are relating to this process. If there is, I may be off  
11 that list because I am a late comer to this group this time  
12 around, so I would like to be on that list. You know, I am  
13 not going to go to every workshop, but I would like to know  
14 that they are happening before they happen. And then,  
15 finally, I want to critique just in a constructive way one  
16 other piece of this report on what has happened to date, and  
17 that relates to natural gas. As we have mentioned to the  
18 staff recently and to Commissioners Boyd and Eggert, not all  
19 of the fuels and technologies are at the same place in their  
20 development curve. As we have heard, and we will hear more,  
21 some are in desperate need of funding for infrastructure,  
22 some are still in the development of the technology, and  
23 others really need money to help buy down the cost of the  
24 vehicles. And though our coalition and our industry is very  
25 appreciative of the level of funding that was maintained for

1 natural gas, biomethane, etc., the shift away from vehicle  
2 buy down to infrastructure is not a good one as far as the  
3 industry is concerned. We are at a place where you can make  
4 a business case, you can privately finance almost all  
5 infrastructure related to refueling for natural gas. We are  
6 also at a place where the U.S. OEMs are wrestling with  
7 whether to reintroduce light-duty natural gas vehicles. And  
8 just like the CEC, and maybe the ARB, are looking for the  
9 OEMs to take the first step and bring those vehicles to  
10 market, not just make an announcement that they are going to  
11 do it, or that they are thinking about it, the OEMs are  
12 looking to the CEC and ARB to put some money up to help buy  
13 down the cost of those vehicles so they can make more of a  
14 business case on their end. So, we are very supportive of  
15 the investment in biomethane infrastructure, and there is  
16 clearly a need there, that is a nascent sector, but even  
17 there significant investments in the infrastructure do not  
18 accomplish what we all collectively want to accomplish if  
19 the vehicles are not there to use the fuel once the fueling  
20 plant is up and running. So I will bring this up again as  
21 we talk about future funding, but this is an important basis  
22 -- a base thinking from the natural gas sector that vehicle  
23 buydown incentives are really the top priority, much more so  
24 than infrastructure at this time.

25 COMMISSIONER EGGERT: A quick comment. I

1 appreciate those comments because I think it gets at the  
2 nature of the question, which is where does the government  
3 investment have the greatest potential impact in the  
4 transition to commercial marketplace. I guess one question  
5 I would have, with vehicle incentives, they can get  
6 extremely expensive extremely fast, so, for example, a  
7 \$5,000 per vehicle incentive for 10,000 vehicles is \$50  
8 million. And clearly this program is not capable of funding  
9 a significant amount of vehicle incentives at those kind of  
10 levels, so one thing I would invite is that the nature of  
11 things like vehicle incentives, how do we make sure that we  
12 are actually going to have a significant impact at a funding  
13 level that is something that can be accommodated by the  
14 program, you know, what is the nature of those incentives?  
15 How long do they last? And at what level should they be  
16 provided at?

17 MR. CARMICHAEL: Two quick points back, 1) \$50  
18 million is a good start. Second is the signal, you know, \$2  
19 million for light-duty vehicles was a small pot of money  
20 from our perspective, but zeroing out is moving in the wrong  
21 direction and has this ripple effect message to Detroit and  
22 other places like, "Has the CEC given up on this  
23 application?" So even \$2 million is a piece of the pie that  
24 says, "No, CEC is still going to fund it." And even if  
25 there are strings, and we talked a little bit about this,

1 that we believe there is going to be some federal funding,  
2 maybe it is in the form of a tax credit, coming in the next,  
3 we hope, this calendar year, and a matching requirement, or  
4 just like we are doing with the ARRA funds, we are seizing  
5 that opportunity to leverage a smaller pot of state money  
6 with a bigger pot of federal money. The same thing can  
7 happen with natural gas, light-duty vehicles, or medium and  
8 heavy duty vehicles. I fully get the point about wanting to  
9 make the most of the money and the CEC cannot change the  
10 world on its own relative to, you know, getting that many  
11 vehicles on the road, but a small pot can be leveraged well.

12 COMMISSIONER EGGERT: And actually, I appreciate  
13 that comment, and I was not sure if Mike was going to do  
14 this, but I did want to highlight, even though we certainly  
15 had hoped to have gotten more Federal dollars through the  
16 stimulus program with our leveraged match, there is sort of  
17 a nice table in the Draft Investment Plan and a paragraph  
18 that talks about our investment of approximately \$36 million  
19 accruing about a \$93 million Federal match and a \$127.8  
20 million private investment, so I take your point that there  
21 is the opportunities that exist there if we partner with the  
22 Federal government, that we can certainly make quite a bit  
23 more out of our money, potentially.

24 VICE CHAIR BOYD: A real quick comment because I  
25 am not a believer of this, too much, but Tim, you make a

1 good point and, you know, we wrestle with what is our role,  
2 we and the ARB, in dividing up roles with who is going to do  
3 what with their 118 money. I think there is a staff to  
4 staff agreement that the ARB money might be more directed  
5 than our money at vehicle buy-down, but that was the past,  
6 we can always review the present and the future. And the  
7 other thing, I have found myself in an awful lot of forums  
8 lately involving energy and sometimes transportation energy,  
9 including the last day and a half, lots of private venture  
10 capitalists, academics, auto companies, fuel providers, lots  
11 of advocates in the small group for natural gas, but this  
12 was a discussion of all types of energy, electricity, etc.,  
13 but I got the same message there from people, that vehicle  
14 buy-down was almost more important than a lot of other  
15 things, so I think it is something we have got to discuss  
16 more and, you know, you will find us as champions of the  
17 role of natural gas and transportation fuel, as evidenced  
18 by, I think, what we have done so far at this agency, and  
19 there seems to be a changing sentiment. And to give you a  
20 message that I got from a very major auto manufacturer just  
21 yesterday, there is renewed interest in light-duty natural  
22 gas, and since this was a not-for-attribution session, I  
23 will not repeat who they are, but they are big, and that  
24 message seems to be getting deeper into the transportation  
25 fuel arena and, a lot of people recognize, the stepping

1 stones to some future that we are still struggling to  
2 identify. So the world may change. Other people here may  
3 have points of view on vehicle technology, as well. But  
4 admittedly, at the time we had to finally fish or cut bait  
5 and make final decisions, you know, there just were not any  
6 natural gas light-duty people other than Honda, and you may  
7 have noticed Honda just kind of puts all their priority in  
8 hydrogen and they just happen to make a natural gas vehicle  
9 they are willing to sell, but they are not willing to step  
10 up to the plate. Even they may push a little harder, and  
11 you probably know more of this than I do, but some of us are  
12 just learning that, in the last couple of days. Our problem  
13 is it is hard to keep up, it is a very dynamic arena and it  
14 is hard to keep the Investment Plan in tune with what is  
15 going on out there, and while we do the best in all our  
16 power to keep you all advised of what is going on, you have  
17 understood and given us a little latitude to modify the  
18 program and to match what is going on. So who knows? I  
19 mean, we will all work together here in forecasting the next  
20 investment period, but I would predict that the reality of  
21 that period will probably differ from our view of it today,  
22 and some of it may be positive, some of it may be negative.  
23 But good point, and I think we need to take that into  
24 account with regard to fuels and technologies and where help  
25 really needs to be given. And one of my big questions of

1 the venture capital industry, if you want to call it that,  
2 is how can we get better signals, we in government, get  
3 better signals about where you are putting your money, and  
4 where government needs to put its money, therefore, because  
5 we do not want to replace that sector. We have chump change  
6 compared to their capabilities, and it is always hard to  
7 know where should government lend a hand to take something  
8 by the hand and lead it deeper into the Valley of Death, or  
9 out of the Valley of Death, so to speak, as it is known in  
10 the industry. So good point, well taken. And we try our  
11 best to deal with that. I will just look at Tom Cackette  
12 now and say I guess our two agencies will have to discuss  
13 how far you go with vehicle incentives and who is going to  
14 do it out of whose pot. You have noticed, we have stayed  
15 away from it -- so far. And maybe that needs to change,  
16 maybe it does not, I do not know.

17 MR. EMMETT: I have a virtual hand in the air on  
18 the phone here.

19 VICE CHAIR BOYD: It is really invisible, but  
20 speak up, Dan, thanks.

21 MR. EMMETT: Okay, moving on from the natural gas  
22 and ethanol discussions, first of all, I wanted to say this  
23 analysis and sort of report out by staff and Commissioners  
24 is really helpful, as is the explanation along with it. I  
25 would like to talk about hydrogen, and I obviously

1 appreciate and am very aware of, sort of, how politicized  
2 funding for hydrogen has been the last two years, and that  
3 the work that the staff and Commissioners have done in the  
4 face of that to sort of stay focused on the merits, on the  
5 technology, on the need, etc. But I do want to make a  
6 couple of comments about two concerns I have, one is -- and  
7 informs sort of moving forward into the next Investment Plan  
8 -- but in terms of this production, it has to do with some  
9 of the analysis in Appendix C, and I know that staff has  
10 received, has done its own analysis and has received  
11 comments from stakeholders such as the California Fuel Cell  
12 Partnership, but a couple points I would like to make that  
13 ultimately reflect a different point of view in terms of the  
14 need and the time period that this Investment Plan deals  
15 with. First of all, looking at this cluster framework is  
16 really important and working very closely with the  
17 automakers and their plans is very important, and I know the  
18 Commission staff has worked to do that, but missing in  
19 Appendix C are the two clusters in Northern California, and  
20 it seems to me that the plans for deployment, as outlined in  
21 the report by and the feedback from the Fuel Cell  
22 Partnership, and hearing directly from the automakers, it  
23 should really include those two Northern California clusters  
24 in the Bay Area and in the Sacramento area. And I wanted to  
25 put that out there and perhaps ask staff to comment on that,

1 and the other point is that I think other feedback that  
2 staff may have gotten regarding sort of the need that has  
3 informed the reduction in funding has to do with needed  
4 kilograms per day. And I would posit that the that the  
5 determination about the need for funding and the need for  
6 stations should not be based only on that particular metric  
7 because a lot of this, because of the cluster approach,  
8 really needs to be about availability of fueling for these  
9 early deployments. This is a really critical time for  
10 deployments of fuel cell vehicles because they are going  
11 from sort of behind the fence, we test operations and  
12 demonstrations to deployments in the hands of real customers  
13 who need to have certain number of stations for fueling  
14 confidence and fuel availability, acknowledging that the  
15 throughput is going to be low for these first couple of  
16 years. But if we look at the deployment plans for the  
17 vehicles and how they are placing them, not just in fleets,  
18 I think it provides a slightly different picture on the  
19 need. And so I would recommend that, certainly moving  
20 forward, that the staff work closely with the stakeholders  
21 such as the California Fuel Cell Partnership and the OEMs to  
22 see if this needs assessment that the staff has done really  
23 matches up with what is going to be so critical. Also, the  
24 point about timing, it has been pointed out that, you know,  
25 from time of award to stations dispensing fuel can be as

1 long as three years, and the analysis in Appendix C goes  
2 out to 2012, and so that does not even get us to the three  
3 years. So I guess what I would say is we need to also be  
4 aware of the lead time, and that feeds into my second  
5 concern, which is the timing of this solicitation that is  
6 about to go out. I understand that this is a huge task and  
7 there is a tremendous amount of work that has gone into this  
8 first year of the program, and getting the money on the  
9 street, and I fully appreciate that. But particularly from  
10 the standpoint of hydrogen and some of the lead times for  
11 the infrastructure to do the permitting, the siting, etc.,  
12 is all the more reason that that should be factored in and  
13 this should happen sooner rather than later. And so I have  
14 some concern around the fact that it has not been released  
15 yet, and particularly in light of comments that I made last  
16 year during the Advisory Committee process, which is that  
17 you have, or staff has at it is disposal the resources or  
18 the expertise, and perhaps even bandwidth, I cannot speak  
19 for the agency, of the Air Resources Board and staff there  
20 that have been taking the lead on hydrogen station award and  
21 deployment over the last few years, so I was under the  
22 impression that that was a resource that was going to be  
23 tapped, that there was some sort of interagency agreement  
24 that was perhaps in the works, but it seems to me that with  
25 CEC staff, very very very loaded down with a tremendous

1 amount of work, to not use that resource is a missed  
2 opportunity, especially in light of the fact that we need to  
3 get these funds out the door. So thanks for letting me  
4 rattle on and on there, but I think those are some important  
5 points about this. And, finally, I think we are also  
6 looking too narrowly at sort of the need for hydrogen, we  
7 are looking very narrowly at the OEMs and their deployment  
8 plans, which is very important, as I have just highlighted.  
9 The other piece of it, though, is in terms of meeting  
10 greenhouse gas emission targets and having this program  
11 really try and deliver those over the medium and long term,  
12 I would argue that there should be some thought put into the  
13 role that these AB 118 funds could play on the production  
14 side for hydrogen fuel, not just the retail delivery, but  
15 the production side, in particular renewable hydrogen  
16 production from waste stuff, from other renewable sources,  
17 especially important in light of the law that CARB is  
18 currently in the process of implementing, SB 5, the Clean  
19 and Renewable Hydrogen Performance Standards for fuel, so  
20 looking at centralized production of renewable hydrogen fuel  
21 would merit perhaps some funding and, finally, buses. We  
22 should be looking at heavy-duty transit applications. We  
23 know the Legislature, the one thing that they do seem  
24 relatively enthusiastic about on the hydrogen front are the  
25 transit applications of the buses, there is a need to look

1 at heavy-duty and hydrogen, but we are not seeing that in  
2 the last plan or the coming plan. Thank you.

3 COMMISSIONER EGGERT: This is Anthony. Thanks,  
4 Dan, for those comments. I think we are starting to sort of  
5 bridge between the previous Investment Plan and the next  
6 Investment Plan in terms of input and issues and concerns,  
7 and such. I would not, Daniel, that the Appendix C does  
8 carry the analysis out to the 2014 timeframe, but I think  
9 your point about the lead time that is involved in  
10 construction and commissioning of stations is an important  
11 one, and then to your point about the need for Northern  
12 infrastructure, you know, we definitely would welcome  
13 additional input on that topic. And I guess I would look to  
14 my fellow Commissioner here about, again, sort of the time  
15 that we have available for today and whether or not we  
16 should jump to the 1011 discussion.

17 VICE CHAIR BOYD: Well, I certainly agree with  
18 where the clock stands vs. our agenda, and I am not seeing  
19 any outstretched hands here. Mike, I cannot remember  
20 anymore if you managed to finish it to the bottom of your  
21 chart -

22 MR. SMITH: Yes, I did.

23 VICE CHAIR BOYD: Okay, it was kind of like leap  
24 to hydrogen because everybody wanted to talk about it, and  
25 then we went off in all kinds of directions. Okay --

1 MR. SMITH: Commissioner, may I take one moment  
2 to respond to a couple of things that Dan raised?

3 VICE CHAIR BOYD: Please do.

4 MR. SMITH: The solicitation that we are about to  
5 release we will probably be releasing in about two to three  
6 weeks, maybe three weeks. Of the \$22 million that we have  
7 identified in the current draft plan that is the legacy of  
8 the original plan, \$3 million of that is going to be used  
9 for transit fueling and, in fact, that will be used with AC  
10 Transit in Northern California. And we identified that in  
11 the current draft plan, so I just want to make sure  
12 everybody understands that. So we recognize that need.  
13 Secondly, and just to give you a little preview on the  
14 solicitation, we emphasize the clustering in the LA area,  
15 that is something that has been worked on, and planned, and  
16 that is where most of the light-duty vehicles are going to  
17 be rolled out, so we really want to emphasize that area;  
18 however, in the solicitation we do recognize and we do allow  
19 for opportunities outside those clusters. So the Northern  
20 California, or Sacramento Bay Area, or other areas,  
21 potentially could be parts, components, of bids that come in  
22 to us. But clearly, we emphasize the cluster in the LA  
23 areas, it is very important. In terms of our working  
24 relationship, we have been working very closely with  
25 stakeholders, with staff at the Fuel Cell Partnership, and

1 with the staff at the Air Resources Board. Certainly the  
2 survey we did and the continuing efforts to keep those  
3 numbers fresh and relevant, and consistent with the Fuel  
4 Cell Partnership is an ongoing process. In terms of the  
5 renewable production, we recognize that that is going to be  
6 an important piece, an important component, or important  
7 strategy in future hydrogen opportunities, and it is going  
8 to be the only way that we are going to get to the very deep  
9 reductions, greenhouse gas reductions, that hydrogen  
10 promises. We also recognize that we can invest AB 118 money  
11 into production of renewable hydrogen, we also recognize  
12 that, through our conversations with the hydrogen suppliers  
13 that there are strategies that they have to bring in  
14 renewable hydrogen. So it is going to be a mixed bag in  
15 terms of where the renewable hydrogen comes from, and I do  
16 not think it would be wise at this point to put all our AB  
17 118 monies in terms of production into renewable hydrogen,  
18 given that there are differing strategies. Just some  
19 responses to the points Dan raised, I am sure I did not  
20 capture everything. Oh, the last thing on the regulations  
21 for the SB 13 -- I keep forgetting -- 1305 regulations,  
22 those are very very important, we certainly recognize that,  
23 and I know ARB has been laboring with that whole rulemaking  
24 process. I know it is a pretty difficult one. The  
25 regulations are going to have a very important effect on our

1 program, and how we use our money, and so we have been in  
2 conversations with staff. We would like to have much deeper  
3 involvement in that rulemaking process given the impact on  
4 our program, so we would just invite that process to be even  
5 more interactive than it is.

6 VICE CHAIR BOYD: Thanks, Mike. One quick  
7 comment, just because something is not listed under hydrogen  
8 does not mean it does not have some potential future for  
9 hydrogen. Certainly everything going on in natural gas sets  
10 a platform that could be used for hydrogen, it is not  
11 renewable, but a lot of discussion of late in forums I have  
12 been in of the fact that biomethane can be taken straight to  
13 hydrogen, it does not have to stop in between. So, to the  
14 extent that we facilitate biomethane, we are adding to the  
15 potential future platform for hydrogen fuels, so that is  
16 recognized and it is not being totally left out.

17 MR. SMITH: Correct.

18 VICE CHAIR BOYD: Okay, if there is not any other  
19 comments, I think we finished with that presentation and  
20 maybe now we can get back to 945, with Chuck talking about  
21 the second draft that we talked about a little bit here.

22 MR. SMITH: I will leave it to you two as to when  
23 you may want to have the discussion about the Budget  
24 Subcommittee.

25 VICE CHAIR BOYD: Ah, well, we were supposed to

1 have done it right now, we got a little bit of reference to  
2 that. Do you want to spend a couple of moments sensitizing  
3 us to --

4 MR. SMITH: I could certainly go over some of the  
5 concerns.

6 VICE CHAIR BOYD: It would help because everybody  
7 kind of needs to know as the second draft goes out there  
8 whether these are the kinds of areas that are touched upon.

9 MR. SMITH: Before I do that, we do need to be  
10 sensitive to Ms. Joffe's travel arrangements, and so we had  
11 promised her.

12 VICE CHAIR BOYD: You are right. We are so far  
13 behind schedule that even that fell off my radar screen. So  
14 now we are going to gain some points in the public comment  
15 period.

16 MS. JOFFE: Right. But I am going to be brief and  
17 positive. And I really appreciate your accommodating my  
18 time schedule, I have to get on a plane very shortly. But I  
19 wanted to talk a little bit about this --

20 VICE CHAIR BOYD: Why don't you tell the audience  
21 who you are and who you represent.

22 MS. JOFFE: Yes, thank you. I am Enid Joffe, I am  
23 President of Clean Fuel Connection. Our company has been  
24 doing electric vehicle charging infrastructure since 1996,  
25 so we are very experienced in this field. And I want to

1 talk about two quick things, first of all, to thank the  
2 Commission and the staff about the draft you are about to  
3 review, we very much appreciate the fact that we have sat  
4 with staff and described some of the things that we think  
5 need to be done to really jumpstart the electric vehicle  
6 industry, they have listened and those things are in the  
7 draft, particularly the issues about EV readiness. And for  
8 the last 10 years, or 15 years that I have been working on  
9 electric vehicles, it has been a little bit like Sisyphus  
10 pushing the rock up the hill, it rolls back, goes up a  
11 little, rolls back a little bit more; now, I feel like we  
12 are near the summit and I can actually see the introduction  
13 of EVs on the horizon. And I also want to -- so I want to  
14 urge you to stay -- this is the closest near-term commercial  
15 market that you have got, and next year is going to be a  
16 really critical year. You have seen the excitement of the  
17 Nissan *Leaf*, the Chevy *Volt* is close behind, all of the  
18 carmakers are introducing cars, and we have got to get some  
19 things in place because those cars are coming. And along  
20 that line, EV readiness and projects -- we are starting one  
21 called "Ready, Set, Charge" -- are very important. But I  
22 also want to talk about the success of a project that you  
23 have already funded. There was a small grant through the  
24 workforce development program with the community colleges,  
25 and it was specifically for EVSE streamlining, permit

1 streamlining. And we are in the process of implementing  
2 that grant, we have had two workshops so far, yesterday we  
3 had 20 to 30 building officials in a room in Watsonville,  
4 and carmakers, dealers, showed up because they wanted to  
5 find out about what was going on because they are not  
6 getting a lot of information either, and it was a very  
7 lively discussion. We are trying to, as you may know, the  
8 process for those of you who have heard my presentations,  
9 you know that it takes 34-45 days to install a charger. A  
10 car is an impulse buy, going in and being excited and  
11 wanting to buy a car, and then finding out it is going to  
12 take 30-45 days before you can drive it home is definitely  
13 not the way to jumpstart a market. So we are having this  
14 dialogue now with the building officials, they very much  
15 want to work with us, but, as you know, just as the state  
16 is, they are very budget constrained. When I throw out the  
17 concept of eliminating permitting and inspection for certain  
18 EV installations, they look at me like, you know, what did I  
19 just propose? So we have got a lot of work to do, but they  
20 are very willing and eager, this is a program that is  
21 working, we have had very enthusiastic response, and we are  
22 looking forward to more of the same in the next Investment  
23 Plan. And I will let you get back to business, and thank  
24 you.

25 COMMISSIONER EGGERT: Just a quick comment, thank

1 you very much, Ms. Joffe, for that. Your analogy of  
2 Sisyphus kind of, you know, in my career it has been more  
3 like, you know, each administration that comes along, each  
4 political transition that occurs usually comes along and  
5 kicks the rock back down the hill and goes and grabs another  
6 round and you never quite get to the top, so I think our  
7 program is trying to simultaneously push up about a dozen to  
8 get over to the summit. And then your point on permitting,  
9 I think, is good one because I think we definitely heard a  
10 lot of discussion about the need for training building  
11 officials to make that process much more smooth and, again,  
12 you know, that seems to be an area where potentially fairly  
13 modest investment could have a significant impact on the  
14 speed at which we can deploy these vehicles. So we very  
15 much welcome your input on that.

16 MS. JOFFE: And one comment I would just make is  
17 that we almost accidentally discovered through the mini  
18 program that we just completed, where we helped install 450  
19 mini chargers in New York, New Jersey, and California, we  
20 discovered that New York City has something called a minor  
21 permitting process, which allows an electrical contractor to  
22 install up to 10 30 to 40-amp circuits in-home without  
23 requiring anything more than an online permit, they are spot  
24 inspected, you know, it depends on the city, the inspectors  
25 tend to know the local electricians. I have presented -- I

1 actually have the paperwork from New York City and I am  
2 trying to get some information about how the process they  
3 went through to get to this minor permitting, because I  
4 figure, I grew up in Brooklyn, so I figure if New York City  
5 can do this, we can do it. But it is interesting, the  
6 responses I am getting, because it is like, "Oh, no, we  
7 can't do that." So that is something we are going to be  
8 pursuing, but I wanted to throw that out there as, you know,  
9 kind of a standard that we should be aiming toward. Thank  
10 you.

11 VICE CHAIR BOYD: Bonnie, do you have a question?

12 MS. HOLMES-GEN: Thanks, Ms. Joffe. I just wanted  
13 -- I really appreciate your comments, this is such an  
14 important issue and it is such an important process we need  
15 to work on. I am just curious, are you working in other  
16 areas? I think you mentioned Watsonville. You are starting  
17 there?

18 MS. JOFFE: Yes. There are a number of areas that  
19 we are working with right now, this was started essentially,  
20 you know, as an industry flash volunteer effort, EPRI has  
21 agreed to be a co-sponsor, as has General Motors, and they  
22 are putting in some seed money. We are currently working  
23 with the City of Riverside, many of you know Mayor  
24 Loveridge, who is quite enthusiastic. We have been working  
25 with Sacramento, we have had several meetings with the City

1 of Sacramento, and their building inspectors and fire  
2 marshals are very interested, working and this particular  
3 grant has been in for Northern California, so we are working  
4 with the nine counties in the Bay Area, and we have had two  
5 of the meetings so far, and we are trying to get some work  
6 groups going and some dialogues and some best practices and  
7 an FTP site, and there are lots of ideas about how we can do  
8 it. But, yes, the City of LA is also interested in doing  
9 this. Lots of good participation, lots of ideas. I am very  
10 pleased to see that people are really putting aside kind of  
11 their competitive interests and really participating, so it  
12 has been great, and I think everybody sees the horizon here  
13 and sees that we really can do it this time.

14 MS. HOLMES-GEN: Thank you.

15 VICE CHAIR BOYD: Thank you very much. All right,  
16 Mike, Chuck, whomever.

17 MR. SMITH: Okay, I will be very quick. Wednesday  
18 was the Assembly Subcommittee 3 and Assembly Member Ruskin  
19 presides over that subcommittee. He raised a couple of  
20 questions, one, as was mentioned, he asked a question about  
21 why we should be investing dollars in ethanol through AB  
22 118. He also raised a question about, or at least raised a  
23 point about reporting, and consulting with the Legislature  
24 and reporting back to the Legislature. There was some  
25 debate about the reallocations that have been made from the

1 original Investment Plan that was adopted last year, and  
2 how those reallocations, those sorts of actions that the  
3 Commission may take, how can we better inform the  
4 Legislature when those actions are taken. They recognize  
5 that the Commission has the authority to make those changes,  
6 but they want to put in place some mechanism whereby we keep  
7 them informed on a routine basis, whether it is reporting as  
8 changes are made, which I think probably, given the  
9 experience we had as evidenced in this table, is probably  
10 impractical, but certainly a quarterly or semi-annual  
11 reporting is something that is very doable. So we are going  
12 to be discussing with the subcommittee staff how we set that  
13 sort of mechanism up. He also had raised a question, not of  
14 me, but when Mr. Boesel and Patricia were up, about the  
15 return on investment. And it was a fairly broad question,  
16 and it is something that he has been thinking about for some  
17 time because I know he has mentioned it before, and whether  
18 or not, how we should be investing in infrastructure vs.  
19 research, and whether there should be some criteria or  
20 standards that are used in making these sorts of  
21 investments. It was a very general question, but evidence  
22 that it is something he is giving some thought to, so I  
23 think we need to be sensitive to that. Those were the main  
24 points that I recall. I do not know, Patricia, maybe there  
25 is something else that I am missing, but those are the

1 points that I think were raised in that committee.  
2 Generally, the subcommittee was favorable with the program  
3 and with our budget request for the additional one-time  
4 increase and the additional tech support money.

5           On the Senate side, they raised -- there were four  
6 specific questions that the Senate raised, one dealing with  
7 the education and outreach allocation, whether that was  
8 necessary given the very highly visible and very high  
9 profile efforts in California to introduce alternative  
10 renewable fuels. They also wanted some input on our \$8.5  
11 million allocation for E-85 stations in California, and  
12 whether or not that sort of investment is indeed a direct  
13 subsidy to the corn growers or ethanol producers of the  
14 Midwest. He also raised -- or the committee also raised in  
15 that context the fact that is it economically and  
16 environmentally prudent, given that other options, such as  
17 ethanol produced from sugarcane has a much much lower energy  
18 input profile. There was a question raised about the \$14  
19 million for hydrogen infrastructure and if this is to  
20 support the hydrogen highway. I made a very clear point  
21 that we are not investing in the hydrogen highway, this is a  
22 very different strategy than what was envisioned in the  
23 hydrogen highway blueprint. And there was some discussion,  
24 and thank you, Catherine, for stepping right up at the  
25 proper moment and talking about hydrogen vehicle costs and

1 the roll-out of vehicles, and the surveys that we have  
2 done, so that was fortuitous. Then, lastly, they raised a  
3 question about -- at least, they did not raise it at the  
4 hearing because time was running short, but they certainly  
5 raised it in their comments, about our doubling of  
6 investments in biomethane, and isn't there a better, given  
7 that the state policy is to reduce and reuse waste, isn't  
8 the investment in biomethane from waste a prudent  
9 investment. So those were the four general points that they  
10 raised in their comments.

11 VICE CHAIR BOYD: See, I thought using biomethane  
12 was reusing waste.

13 COMMISSIONER EGGERT: Actually, I was not at the  
14 hearing, but when I was reading through the notes, the staff  
15 notes, it appeared that their interpretation of the outreach  
16 and education, they characterized it as "industry outreach?"

17 MR. SMITH: Yes.

18 COMMISSIONER EGGERT: Which I think is our intent  
19 is much broader than that.

20 MR. SMITH: Correct.

21 COMMISSIONER EGGERT: So I guess, given our  
22 discussion earlier this morning, it seems the need for  
23 additional outreach and education is still very much  
24 significantly needed, and I guess I just wondered, was the  
25 conversation believable to further explain what that

1 particular investment was for?

2 MR. SMITH: Yes. Essentially, we are focusing in  
3 several different areas, 1) consumer education about the  
4 availability of vehicles, the availability of fuels, the  
5 performance of vehicles, prices, I mean, there are myriad  
6 issues that, while there are significant efforts in  
7 California, probably the most of any state in the nation to  
8 move in this direction, there is still a large number of  
9 consumers that really have very scant or no knowledge of  
10 these vehicles and fuels and what can be done with these  
11 fuels. So it is reaching out to consumers. Secondly, it is  
12 also reaching out to local decision makers. We are  
13 certainly seeing inconsistent treatment of permitting of  
14 facilities ranging all the way up from the large production  
15 facilities right down to permitting of individual stations.  
16 And I think it is important that we provide objective and  
17 relevant information to these decision makers so they can  
18 act in a more effective manner in permitting this  
19 infrastructure. And thirdly, there is a whole community of  
20 fleet operators that could benefit from knowledge of the  
21 availability of vehicles and fuels and the economic benefits  
22 of different types of medium- and heavy-duty trucks, and  
23 light-duty vehicles and the fuels and availability of those  
24 fuels. So it is a broad spectrum of outreach to consumers,  
25 decision makers and policymakers.

1 MS. HOLMES-GEN: Can I make a quick comment?  
2 This is Bonnie. I appreciate the discussion, and in terms  
3 of the Senate Committee, that the item was left open, the  
4 committee will come back to this, and in terms of asking for  
5 help from Advisory Committee members, we want to be helpful  
6 and be there, this would be a good opportunity to develop  
7 some kind of list of key milestones that we, that the state  
8 expects to achieve with this program, not just in terms of  
9 funds going out, but actual on-the-ground equipment,  
10 batteries, vehicles that we expect will be deployed because  
11 of this program. Some of that type of information would be  
12 extremely helpful in helping us in advocating.

13 COMMISSIONER EGGERT: I think one question I would  
14 have is, to the extent it is not currently within the  
15 Investment Plan, I know in some categories it is more clear  
16 about what the specific path is towards, you know, future  
17 goals and commercialization, and such, so where it may be  
18 lacking. I guess one other thing I would add and, again,  
19 this is based on feedback I had heard from the hearings,  
20 sort of the importance of communicating to our friends in  
21 the Legislature, the value of the process that exists for  
22 actually establishing a Strategic Investment Plan, basically  
23 in these meetings that we are having right now, these  
24 discussions that we are having, the input that we could get  
25 from the workshops that lead up to the Investment Plan,

1 subsequent workshops that discuss with the various  
2 communities the goals of the Investment Plan, and then  
3 eventually, ultimately, the decision to actually sort of go  
4 with a particular allocation of funds. It is probably  
5 something that is going to need to be emphasized on an  
6 ongoing basis.

7 MS. MONAHAN: It is good to hear, I think, both  
8 Commissioner Boyd and Commissioner Eggert support this idea  
9 that there needs to be a more robust story of the successes  
10 of this program being reported out, which is, when certain  
11 members of the Advisory Committee ask for some more detailed  
12 information about actual environmental and economic benefits  
13 from this program, the message came back, well, this is only  
14 going to happen as part of the two-year -- the name of the  
15 report that CEC does every two years. But I am heartened to  
16 hear that there is going to be more attention to that, I  
17 think that is great. And then, I just have a question about  
18 the agenda. I think we are falling behind and I want to eat  
19 lunch, I am presuming other members do, as well, and I am  
20 wondering if we could just do an agenda check to see where  
21 we are.

22 VICE CHAIR BOYD: We were just talking about that  
23 up here and Commissioner Eggert actually planted the seed.  
24 It might be wise to just break for lunch now, give you a  
25 seven-minute head start on the rest of the lunching

1 community, and then come back and pick up with the agenda  
2 which we are behind, we need to now have that discussion, I  
3 think, right after lunch of the second draft, or the Draft  
4 Investment Plan itself. Commissioner Eggert is suggesting  
5 12:45, but it is tough to get lunch around here. So, you  
6 know, if I say 1:00, you will be lucky to get lunch and get  
7 back here, but I think I will stick with 1:00. We will  
8 police the agenda much more rigidly from this point forward.  
9 But all that we have talked about now are basically things  
10 we knew we needed to talk about, so thanks everybody. Hope  
11 you find lunch in a hurry.

12 (Off the record at 11:51 a.m.)

13 (Back on the record at 1:13 p.m.)

14 COMMISSIONER EGGERT: Okay, I think we are going  
15 to go ahead and try to get started. I think we have a  
16 critical mass and Commissioner Boyd is going to be a little  
17 bit later to the meeting, he had to take care of a couple  
18 business issues.

19 So my read of the agenda here has us right now at  
20 the key changes in the second staff draft of the 2010-2011  
21 Investment Plan, which puts us only two and a half hours  
22 behind schedule. But I think this morning's conversation  
23 was actually quite useful and informative, and then  
24 certainly we got into a number of the issues that are likely  
25 to be relevant to this next Investment Plan, so perhaps we

1 are maybe not as far behind as it might seem. But I would  
2 ask that we move through this relatively quickly and get  
3 right to the discussion so that we have time for comments  
4 from the Advisory Committee, as well as public comment, and  
5 I have already quite a number of cards from folks that want  
6 to provide us some input from the public. So go ahead, take  
7 it away, Chuck.

8 MR. MIZUTANI: Okay, thank you, Commissioner. I  
9 was going to suggest as well, a lot of the summary is really  
10 a summary of the changes that were made in the Investment  
11 Plan, which I think a number of topics have already been  
12 discussed this morning, so if I may, I would like to be able  
13 to go as quickly as possible through just to summarize what  
14 the changes were that were made to the Investment Plan. One  
15 other point is, a Suzanne Seivright needs to leave by 2:00,  
16 and so if possible, if necessary, if we could perhaps allow  
17 her the three minutes for public comment at that time, or  
18 before.

19 COMMISSIONER EGGERT: Yeah, I think that would be  
20 fine. How long do you think your comments will take?

21 MR. MIZUTANI: I am hoping that it could be done  
22 in about 15 minutes.

23 COMMISSIONER EGGERT: Okay. So maybe immediately  
24 after that. Is Suzanne here? Okay, so we will check to see  
25 if she is available at that time to make her comments.

1 MR. MIZUTANI: Okay. So I -

2 MR. CACKETTE: Chuck, before you start, can I be  
3 clear on what the title means? Are you going to be talking  
4 mainly about how the second draft changed from the first  
5 draft, or the Investment Plan changed from the first  
6 Investment Plan?

7 MR. MIZUTANI: No, these are changes to the first  
8 draft of the 2010-2011 Investment Plan. So anyway, in the  
9 introduction section, based upon comments at the last  
10 Advisory Committee meeting, as well as docketed material, we  
11 have made revisions, and so I am sort of going through what  
12 hopefully the significant changes that were made to the  
13 first draft Investment Plan.

14 So the first one was, there were questions about  
15 the loans, and so we have put in a short summary sort of  
16 distinguishing what the Energy Commission's funds would be  
17 used for in terms of companies securing loans. And so the  
18 monies that we would have would be used to provide credit  
19 enhancements or reduce the bond issuance costs. In  
20 addition, our funds could be put into a loan loss reserve  
21 account to provide some security to the lending  
22 institutions, that they would not be 100 percent at risk if  
23 a project did not come to fruition. And so that was the  
24 description of what our monies would be used for in the area  
25 of loans. In addition, there were a number of questions

1 dealing with our methodology, and our methodology is  
2 provided in the Appendix, but what we thought we would do is  
3 to provide a short description of the methodology that we  
4 used to look at what the funding categories and eventually  
5 the funding allocation would be. And, in essence, the  
6 summary -- there are two phases that we look at, the first  
7 one is we start with a forecast from today to 2030, and  
8 then, from that time on, we project out to 2050. And based  
9 on that, we then develop a scenario of the various fuels and  
10 penetration to determine, you know, what would be necessary  
11 to meet the 2020 and 2050 GHG goals. The second phase is to  
12 then look at what funding has been undertaken or been  
13 completed, both public and privately, and then, from there,  
14 we would know what funds would be needed to realize some of  
15 the 2020 and 2050 goals. The third area is that there are  
16 significant and important areas that are not in the vehicle  
17 hardware or equipment refueling, and those are what we are  
18 characterizing as non-GHG categories such as sustainability,  
19 workforce development, and things like that. So basically  
20 it is a two-step process that we go through, and we just  
21 provided a summary of, I think, Appendix A.

22           The other thing that we added was a summary  
23 narrative of how we see the general pathways being from 2020  
24 to 2054, the individual alternative fuel areas. And, again,  
25 it is just a summary to give the reader more of a context

1 when they read the more detailed sections in the Investment  
2 Plan.

3           In the Electric Drive, one change that we made was  
4 we consolidated the non-road applications into the medium-  
5 and heavy-duty vehicles, and the reason being that I think  
6 the important thing, the critical thing really is the  
7 vehicle technology, the medium- and heavy-duty vehicle  
8 technologies, and that those technologies can have the  
9 potential to be used in non-road, as well as on-road  
10 applications, and so we combined originally the non-road  
11 with the medium- and heavy-duty on-road vehicles. We also  
12 provided some information about charging times, some various  
13 level charges, and then we added a discussion on battery re-  
14 use; it potentially is an important area that should at  
15 least be considered, or at least brought into our  
16 considerations. And so what we have done is we have  
17 provided a summary of what the PIER Program is doing in  
18 terms of identifying and evaluating the potential battery  
19 use strategies.

20           On Electric Drive Infrastructure, we heard  
21 basically sort of comments this morning from Enid, but  
22 basically she is calling it the *EV Community Readiness*, and  
23 what it is, we also identified the need for streamlining the  
24 installation process for residential charging stations. And  
25 that is an area that we have put in there for consideration

1 in terms of potential funding. Also, we have included the  
2 residential electric vehicle supply equipment, which  
3 basically is, again, on the user side, we basically just  
4 informed the reader that there is a current Federal tax  
5 credit of 50 percent that will be expiring in 2010, and that  
6 is another area for possible Energy Commission consideration  
7 of funding.

8 In the area of Hydrogen, in the discussion at the  
9 last Advisory Committee meeting, the term "refresher rates"  
10 was raised and so we have included that into our Hydrogen  
11 Infrastructure section. We also provided some additional  
12 information that will be in the hydrogen solicitation and we  
13 talked about that a little bit this morning, but one of the  
14 areas that we will be including in the solicitation is this  
15 sort of incentive for a proposal that could build a filling  
16 station in a shorter timeframe than what we had previously  
17 identified with 12-24 months. Also, in this section, we  
18 identified that, of the \$22 million, \$3 million would be  
19 used for transit hydrogen fueling stations.

20 Gasoline Substitutes -- previously, I think the  
21 title was "Ethanol," and so we have changed the title. We  
22 also have added a section that at least describes that there  
23 are a number of substitutes for gasoline, in addition to  
24 ethanol. And so we have identified some second-generation  
25 biofuels and their production processes, and also we

1 provided a little more information on the Low Carbon Fuel  
2 Standard.

3 Diesel Substitutes - again, it is sort of similar  
4 to gasoline in terms of biodiesel, but one of the things  
5 that we tried to do because, again, in the discussion at the  
6 last Advisory Committee meeting, it was sort of begged for  
7 us to make these changes, a clear distinction between the  
8 issues as they relate to biodiesel vs. renewable diesel. We  
9 also provided some information, updated information, about  
10 ARB's research into the possible NO<sub>x</sub> concerns with respect to  
11 biodiesel. And also a clarification in the area under the  
12 fuel terminal storage and blending, there is a potential  
13 need from the industry's perspective in terms of competing  
14 in the marketplace of tanks, fueling tanks for both fuel, as  
15 well as feedstock, and the feedstock being domestic and  
16 foreign, so we expanded the discussion to include feedstocks  
17 in that section.

18 In Natural Gas, we made no changes. In Propane,  
19 one question that came up was "why propane?" And so what we  
20 have done is we provided some additional information about  
21 the potential of new fuel supplies for propane that could be  
22 of benefit in terms of meeting our 2020 and our 2050 GHG  
23 goals from a fuel supply perspective, and so we have a  
24 discussion on that, as well as identifying the activities  
25 that are going on with respect to developing a renewable

1 propane source.

2 Under Innovative Technologies and Advance Fuels,  
3 the DOE has put out a solicitation for research and  
4 demonstration of fuels directly from sunlight, and so we  
5 have added that into this section.

6 In the Market and Program Development area, one of  
7 the things that we have added that has sort of come up  
8 recently, and that is with respect to sustainability and the  
9 low carbon fuel footprint, there may not necessarily be the  
10 wherewithal for small businesses to be able to meet the  
11 criteria in our various solicitations to provide their GHG  
12 footprint, using full fuel cycle analyses for new pathways  
13 that have not been developed by the Air Resources Board, and  
14 so we thought that it would be a good possible use of our  
15 funds to provide that service to such small businesses.

16 And that concludes a summary of the changes to the  
17 initial draft 2010-2011 Investment Plan.

18 COMMISSIONER EGGERT: All right, thank you very  
19 much, Chuck. And so, I guess at this point, if anybody, if  
20 any of the Advisory Committee has questions about the  
21 changes? Bonnie.

22 MS. HOLMES-GEN: I just wondered if I could just  
23 ask my perennial question, if I could get another update on  
24 biodiesel NO<sub>x</sub> research, there is a little bit of an update  
25 and I am wondering if Tom could just update us where we are

1 at with that, and the potential mitigation options.

2 MR. CACKETTE: I do not think --

3 MS. HOLMES-GEN: Okay, can someone from the staff  
4 comment?

5 MR. MIZUTANI: Basically, I mean, we are looking  
6 toward ARB to address that. I mean, it is an air quality  
7 issue that needs to be addressed, so we are just following  
8 the activities of the ARB.

9 MS. HOLMES-GEN: Okay, I will look more closely at  
10 their NO<sub>x</sub> mitigation plan.

11 COMMISSIONER EGGERT: Bonnie, just to clarify, is  
12 this in reference specifically to the page 52?

13 MS. HOLMES-GEN: Yes.

14 COMMISSIONER EGGERT: Okay. Any other questions?  
15 Patty.

16 MS. MONAHAN: As I read through the Investment  
17 Plan, I realize it is a little bit nebulous about for  
18 biodiesel and ethanol, about whether the incentives are  
19 going for advanced or conventional biofuels, and I wonder if  
20 you could elaborate on that?

21 MR. MIZUTANI: For those fundings, in terms of  
22 gasoline substitutes, in this case right now, the fuel is  
23 ethanol. We are pretty much looking at advanced ethanol  
24 production.

25 MS. MONAHAN: That is great. You might just want

1 to be clearer in the language, then, because it was a  
2 little confusing. I thought that was the case, and then I  
3 read through the language again and it was not very clear,  
4 and with biodiesel, as well, so maybe just specify that the  
5 expectation is all the money will go towards next generation  
6 or advanced low carbon.

7 MR. MIZUTANI: Okay.

8 MS. MONAHAN: Thank you.

9 COMMISSIONER EGGERT: I was just going to say, I  
10 mean, one thing I thought the staff did do a good job on in  
11 this, both the gasoline and the diesel section, is to sort  
12 of recast it and recognize the suite of different end  
13 products that could be derived from things like renewable  
14 biomass. And, you know, I think that gives us the  
15 opportunity to look at what investment opportunities exist  
16 within this category, and make those investments  
17 strategically. But your point is a good one. Brooke?

18 MR. COLEMAN: Just a quick question and a comment.  
19 What is the definition of "advanced" and I am not sure that,  
20 I mean, have we made a policy decision that all new money  
21 goes to advanced? I mean, that does not strike me as  
22 something that we have decided to do. I mean, what is  
23 "advanced?" I am not trying to be confusing, I really would  
24 want --

25 MR. MIZUTANI: No and Mike just came in and wanted

1 me to clarify, the intent is to focus on advanced biofuels,  
2 and in terms of advanced biofuels, that could include  
3 ethanol, renewable diesel, and so on. But, in addition, it  
4 could possibly include some funding for like the CPIP, or  
5 basically the productive incentive that we have talked about  
6 this morning on existing ethanol, so it could include that.  
7 But again, in terms of the CPIP, you are looking at  
8 currently a corn-based ethanol production facility that will  
9 have sort of requirements to move toward alternative  
10 feedstocks and things like that, so there is, in terms of  
11 the use of the money, we still would be moving toward more  
12 renewable or more advanced technologies, or biofuels.

13 COMMISSIONER EGGERT: I guess the one other thing  
14 I would say is, you know, to the extent that all of our  
15 programs will be looking to maximize the multitude of goals  
16 of the program, including petroleum reduction, energy  
17 diversity, air pollution reduction, and climate benefits.  
18 Any other questions about the changes? Has everybody had a  
19 chance to read the entire second draft?

20 MR. MIZUTANI: One other thing, Commissioner  
21 Eggert, I have got another suggestion to make a comment.  
22 Jim McKinney appropriately mentioned that, in terms of our  
23 solicitations and our scoring criteria, one of the major  
24 scoring criteria is the sustainability. In terms of  
25 sustainability, that includes GHG footprints, as well as

1 other sustainability goals that we are looking at. And so  
2 the basis in terms of what projects we will be funding, a  
3 project will score higher the greater the sustainability  
4 score is. So there is another way of basically sort of  
5 forcing the development of the fuel to a sustainable or a  
6 renewable fuel process.

7           COMMISSIONER EGGERT: I also just wanted to  
8 highlight a couple of things that Chuck had mentioned,  
9 including the addition of the technical assistance, or the  
10 full fuel cycle analysis assistance to companies that --  
11 again, I see that this could have the potential of providing  
12 a fairly low-cost way of accelerating investments in those  
13 technologies by providing them the analysis that would  
14 attach a carbon intensity value to their product, that then,  
15 assuming it is a good one, they can then go out and use to  
16 raise private capital for the investment to sort of show  
17 that it has value under the state policies. And then I also  
18 wanted to highlight that Chuck mentioned the fact that we  
19 put in the bullet about the fuels from sunlight innovation  
20 hub, and that was partially in response to the opportunity  
21 that existed with the DOE's innovation hub for that topic.  
22 And I guess one question is, a question to the committee is  
23 to how we should best position ourselves and respond to  
24 opportunities that do come from the federal government, that  
25 are in the topic categories of advanced vehicle and low

1 carbon fuels. In this case, it is about a \$120 million  
2 program funded over five years, and so we wrote a letter of  
3 support for the proposal, but I suspect that we might be  
4 seeing more of these coming down the pike, given the current  
5 interest in this area at the Federal level, and how shall we  
6 best leverage our program against that. Roland?

7 MR. HWANG: Well, I definitely think we should be  
8 taking advantage in a very fast manner of any kind of  
9 opportunities that do arise, but I guess the question does  
10 become with this new innovative technology, is this the Cal  
11 Tech?

12 COMMISSIONER EGGERT: There are actually a couple  
13 different proposals from California, but Cal Tech was one of  
14 the leads, yeah.

15 MR. HWANG: Yeah, I guess the challenging part, I  
16 mean, from my perspective as an Advisory Committee member,  
17 is that not all opportunities are equal, so the question is  
18 how, if the Energy Commission and the Energy Commission  
19 staff should be evaluating and looking at opportunities, the  
20 question is how do we distinguish what are good  
21 opportunities and what are not opportunities we think are  
22 appropriate. So I guess maybe to think about what is that  
23 process for which we can make that decision, and  
24 particularly on this project, is there something more we  
25 could learn about the opportunities. It is a brand new,

1 very intriguing technology, but it does seem very  
2 innovative in the potentially longer term.

3 COMMISSIONER EGGERT: Yes, I think, you know, to  
4 that point, I think we would invite suggestions. You know,  
5 these opportunities tend to come up with very short notice,  
6 you know, and short lead time in terms of making a decision  
7 about whether or not we want to partner with the proposers.  
8 So we would need to have something that allows for a rather  
9 rapid response and evaluation.

10 MR. HWANG: In terms of this technology, it does  
11 look promising, however, I guess my concern would be other  
12 technologies where it might be a little more controversial  
13 about if there are some sort of environmental trade-offs.  
14 It is kind of a theoretical context, but perhaps judgment is  
15 definitely needed to be exercised in terms of where we think  
16 we might have more controversy than in other areas.

17 COMMISSIONER EGGERT: Okay. Any other questions,  
18 comments?

19 MR. COLEMAN: This is Will Coleman on the phone.  
20 Can you hear me?

21 COMMISSIONER EGGERT: I am sorry, who is that?

22 MR. COLEMAN: Will Coleman.

23 COMMISSIONER EGGERT: Oh, go ahead, Will.

24 MR. COLEMAN: Yeah, hi. Just going back a little  
25 bit to the update, you mentioned the priorities are now,

1 there is some description of the priorities in the  
2 document. And I appreciate the update earlier. I was  
3 planning a response to where the dollars are going. I would  
4 sure hope that that description of the priorities and how  
5 they are determined would go a little bit deeper, along the  
6 lines of the comment that was made about the sustainability  
7 scoring and how that is done. I think the last time that we  
8 had discussed the need to see the metrics used for scoring  
9 these products and the selection criteria, and I would like  
10 to see these presented at this level, but also made more  
11 transparent to the applicants so they get a sense in advance  
12 of how they will perform before they sink a ton of time in.  
13 This is particularly important, I think, for some of the  
14 smaller and younger companies that will be applying. But  
15 what I mean in terms of criteria is, you know, things like  
16 around how the carbon scoring is weighted, how the job  
17 growth is scored, how sustainability is scored. I do not  
18 know that we have been given a sense of how those basic  
19 metrics are being applied and, then, how that prioritizes  
20 various projects.

21 MR. MIZUTANI: Will, a suggestion would be to look  
22 at the most recent solicitation on biofuel production. In  
23 there, I think we just posted an addendum that probably goes  
24 into more detail than you would like about how we are going  
25 to be reviewing and scoring the sustainability criteria.

1           MR. COLEMAN: Yeah, I think there are two things  
2 here, one is how it is done within the solicitations, and  
3 the other is how we are thinking about allocations based on  
4 that because my understanding is that, you know, the  
5 discussion this morning pivoted around whether people think  
6 we should be spending X millions of dollars in one category  
7 vs. another. It seems like that has been an ongoing  
8 discussion, and I am still trying to wrap my head a little  
9 bit around how we are weighting these things at the top  
10 level. And it feels like if we understood a little bit  
11 better how that scoring is being done, and then ultimately  
12 how they are going to be evaluated in terms of the  
13 efficiency and the deployment of these dollars towards the  
14 priorities that we had set up, I think it would negate some  
15 of those disagreements about where these dollars should be  
16 going.

17           MR. McKINNEY: Will, this is Jim McKinney of  
18 Energy Commission staff. This works at two levels. So the  
19 first cut is the policy document that we are discussing  
20 today, so the Investment Plan. That identifies funding  
21 categories by technology type and fuel pathway. When we get  
22 to scoring projects for GHG and sustainability and market  
23 transformation and everything else in there, we are not  
24 comparing, say, natural gas to -- that is not a good example  
25 -- we are not comparing medium- and heavy-duty vehicles to

1 biorefinery production; we are comparing projects using the  
2 scoring criteria within those Investment Plan categories.

3 MR. COLEMAN: Uh huh.

4 MR. McKINNEY: So, for example, for advanced bio-  
5 refineries, the solicitation Chuck just mentioned, we  
6 revamped the sustainability criteria quite extensively so  
7 that we can distinguish really on all the sustainability  
8 attributes that we expect to see at play in the bio-refinery  
9 proposals.

10 MR. COLEMAN: I guess I still -- I am going to  
11 hearken back to an early discussion we had in last year's  
12 set of meetings, and that is just around -- I think there is  
13 clearly a disagreement in terms of how these dollars are  
14 being allocated at the top level. And I am just a little  
15 bit weary of the fact that, as we get further into this  
16 program, we take a look back at how the dollars were  
17 allocated. We are not going to get in trouble for how we  
18 allocate them within categories, we are going to get in  
19 trouble for how we have allocated them across categories  
20 because, you know, we are going to find things that \$1.00  
21 goes a lot further in one category than another, and I am  
22 trying to understand the justification, still, from a  
23 quantitative basis for doing each one of these. I  
24 understand there is a kind of gap analyses and people are  
25 trying to do this from various levels, but I am still trying

1 to understand how the selection criteria that we are using  
2 within the categories, how that trickles up, or how we are  
3 using some of those same metrics at the top level.

4 COMMISSIONER EGGERT: This is Anthony again. And  
5 I do think that is a very important discussion and an  
6 ongoing one that we should invite input and comment on, and  
7 I think there is sort of a variety of quantitative criteria  
8 and qualitative criteria that need to be taken into account  
9 as we sort of balance the priorities at the top level, which  
10 is, you know, where we put the money by broad category, and  
11 even within the categories where we are actually placing  
12 those bets. So, again, we invite that input and I suspect  
13 that, as this program does go forward, we will be evolving,  
14 I think, and hopefully adapting to changing conditions on  
15 the ground. But those are good comments. I did want to  
16 also make mention of --

17 MR. COLEMAN: I just have one more question in  
18 that regard. How do we go about doing that? So we  
19 obviously can make comments at the Advisory Board level, but  
20 I am just wondering, how do we go about commenting on those  
21 allocations and getting a better sense of what the  
22 efficiency is of the dollars deployed in each one of those  
23 buckets?

24 MR. MIZUTANI: Well, here are two avenues, one is  
25 we had mentioned that, after this Advisory Committee

1 meeting, I think we have scheduled three workshops  
2 throughout the state, so there is one avenue; the other one  
3 is basically submitting your comments to the docket.

4           COMMISSIONER EGGERT: Yeah, and I think the other  
5 thing, too, as we had discussed earlier this morning, is to  
6 provide additional information about the -- actually, these  
7 are my own words here, that sort of the proposed performance  
8 of these projects which are coming in based on the  
9 applications that we receive an award, and then post-  
10 evaluation, which we do intend to do on an ongoing basis,  
11 looking back to see the actual performance of these  
12 projects. I would also say, on the specifics of the scoring  
13 criteria, as Chuck mentioned, there was recently an addendum  
14 to the bio-refinery solicitation, which does include a  
15 significant amount of a greater level of detail, especially  
16 as it relates to the sustainability components. I know we  
17 have somewhat of a desire to try to make sure that those are  
18 broadly applicable across categories, it is not always  
19 possible to do that, but where it is possible to try to  
20 apply the same scoring criteria so that we are making sort  
21 of similar calls as it relates to the different categories  
22 of even, you know, how the project team is, what its GHG  
23 performance is, etc.

24           I do want to respect the special request we got  
25 from a member of the public, who needs to take a flight by

1 2:00. Is Suzanne Seivright here? If you would not mind  
2 making your brief comments, and just come up to one of the  
3 microphones here, or at the podium.

4 MS. SEIVRIGHT: That would be great.

5 MR. CARMICHAEL: Commissioner Eggert, I am fine  
6 with that, of course, I want to honor time concerns, but I  
7 do have a couple comments, as well.

8 COMMISSIONER EGGERT: Sure.

9 MS. SEIVRIGHT: Good afternoon, my name is Suzanne  
10 Seivright, I work at Valley Power Systems, I am the  
11 Government Affairs Coordinator. I have two suggestions for  
12 the Investment Plan that had more to do with the type of  
13 technologies that were being selected, I guess, to go out  
14 for solicitation in the areas of hydrogen, as well as  
15 natural gas. I know that, in the previous Investment Plan,  
16 all of the hydrogen money went towards hydrogen  
17 infrastructure, however, I guess there is also a paragraph  
18 in there that talks about bridging technologies, such as  
19 using hydrogen engines that have, well, I guess you could  
20 say they are hydrogen, natural gas engines that use various  
21 blends of hydrogen fuel. And, you know, there is a company,  
22 Desone & Fuquar [phonetic], I do not know if you guys have  
23 met with them before, they actually constructed a plant in  
24 Suwanee, Georgia, last year and they manufacture natural gas  
25 engines and they also have R&D programs for HCNG engines,

1 but a section, I guess, where they could submit an  
2 application, I guess, for R&D funding next year would be  
3 great. And they are looking at three different  
4 applications, transit, refuse, as well as school, in an 8-  
5 liter engine, as well as the 11-liter for the transit and  
6 refuse, and I had submitted docket, so that has all the  
7 details and you know how these applications are, it is a  
8 book, and that is all available upon request. Another  
9 suggestion I had was in reference to targeting maybe  
10 specific niche markets such as refuse trucks, again,  
11 possibly powering diesel refuse trucks with natural gas  
12 engines at their midlife upgrade. Outside South Coast Air  
13 Basin, refuse trucks, I mean, according to CARB's rule, I  
14 mean, they are only required to put on a diesel particulate  
15 filter, they do not have to go any further as far as testing  
16 out alternative fuels, reducing their NO<sub>x</sub>; however, if we  
17 would incentivize these fleets, you know, maybe we could get  
18 more buy-in from these groups and kind of just use it as  
19 seed money to really develop, so that would be my second  
20 suggestion. In any case, my dockets were submitted, I  
21 appreciate your time listening to me today, and I hope you  
22 all have a wonderful weekend. Thank you.

23 COMMISSIONER EGGERT: Thank you very much for  
24 those comments. I guess a question to Chuck, I did notice  
25 that the HCNG technology is called out in the infrastructure

1 section for hydrogen as one that we are looking at. I  
2 wonder, is there a place for it on the vehicle side? Is  
3 there under the Hybrid category? Okay.

4 MR. MIZUTANI: Yeah, we will take a look at her  
5 docketed material and see how that can be incorporated into  
6 the Investment Plan.

7 COMMISSIONER EGGERT: Okay. Thank you, Suzanne.  
8 Tom, I know you had a comment you wanted to make.

9 MR. CACKETTE: Yeah, I had this three minor points,  
10 one I think I mentioned last time, that your charts in the  
11 back that show the greenhouse gas or carbon intensity in the  
12 fuels did not include propane, and I know you took them from  
13 us, so I am just assuming that our charts did not include  
14 propane either, but you are funding a couple million dollars  
15 a year for propane, and I was wondering if you got a source  
16 or could update those so at least people would know where  
17 propane stands on the carbon intensity charts that are -- I  
18 think it is back in Appendix B, or something like that. The  
19 second thing is, and I may have missed this reading the  
20 report, but LNG comes out poorly from a greenhouse gas  
21 standpoint compared to NG, and is there anything that lists  
22 how much of the NG-related monies, either infrastructure or  
23 vehicle related that is being spent on LNG vs. CNG?

24 MR. MIZUTANI: We have that information. I think  
25 for the most part it is included in the Investment Plan in

1 the narrative, but we have that information and I guess we  
2 will see how we can maybe make it more explicit.

3 MR. CACKETTE: I could go back and read it closer,  
4 maybe I just missed it. You know, we are spending a lot of  
5 the NG money on stuff that gets no GHG reduction vs. stuff  
6 that gets a substantial GHG reduction, it seems like that  
7 ought to go into our prioritization.

8 COMMISSIONER EGGERT: And I guess I would  
9 distinguish between LNG for natural gas vs. LNG, for  
10 example, for landfill gas in terms of -- GHG performance is  
11 substantially different, yeah. Okay.

12 MR. CACKETTE: And the third thing is on hydrogen,  
13 I could not understand from this, so I am hoping you can  
14 point me to either where it says this, or what your thinking  
15 process was, but if you go to Table C-1, it looks like the  
16 purpose of that table is to match up supply and demand and,  
17 as you know, with a limited number of stations, you have got  
18 to have excess supply capability to meet demand. And at the  
19 end of every day, the last car is not going to seek out the  
20 last kilogram of hydrogen that is in the system, so there  
21 needs to be some significant excess capacity. And what I  
22 could not tell is where you took that into consideration, if  
23 you took it into consideration, and then, when you go to  
24 page 40, it just says, well, there are all these  
25 uncertainties and we decided we are going to put in \$14

1 million. And so I could not figure out what the logic was,  
2 where it came from, or even whether you thought that supply  
3 and demand was met by Investment Plan 1, and the \$14 million  
4 was thrown on top for these uncertainties. So is there a  
5 clearer -- can you give me a clearer understanding of how we  
6 got from the numbers to the dollars? And either point me to  
7 where it says that or just explain it?

8 MR. WARD: There was a comment about that earlier  
9 today about the need for us to coordinate closely with Air  
10 Resources Board and California Fuel Cell Partnership, we are  
11 working on these numbers continually and continually since  
12 the first draft of the Investment Plan, so as a matter of  
13 fact, even last night there were a few e-mails, so we want  
14 to make sure we get the numbers correct. We are not  
15 allocating funding just to hit it right on the money, we  
16 understand that there needs to be excess capacity at each  
17 station, and back-up stations within regions, so we are  
18 trying to address both of those needs with the upcoming  
19 solicitation. Not knowing how that will turn out, it is  
20 difficult to assess the needs for ongoing after next year,  
21 and I think that is why we have come to the language  
22 described for the \$14 million. Does that help?

23 MR. CACKETTE: What happens if the numbers say  
24 that you need 50 percent more than what you have calculated,  
25 since I do not know how you have calculated, I cannot judge

1 that, but does that mean that the money goes up by seven  
2 more million dollars? Or does it mean that we just run  
3 short of stations? Or what does it mean?

4 MR. WARD: No, actually, I think quite a bit of  
5 the information that we are using has come from the Air  
6 Resources Board, so we are trying to use the information you  
7 provided in early January to come up to that. We cannot  
8 know how the solicitation will result, we understand that  
9 the industrial gas companies have honed down their bid  
10 process and their models to make sure that they are more  
11 receptive to the market, in other words, the costs have been  
12 coming down significantly. I am quite optimistic that the  
13 \$19 million apply to retail solicitation for hydrogen  
14 fueling facilities will meet the mark out to 2012, at least.  
15 That having been said, we have this as a back-up to that  
16 next year should we determine that the response from the  
17 solicitation that will be going out on the street on May 17<sup>th</sup>  
18 is not adequate.

19 MR. CACKETTE: But this money for the Investment  
20 Plan 2 would arguably go out let's say in early '11, maybe,  
21 and if it takes two plus years to site and build these  
22 things, then that is already stations that are going to be  
23 in place well into 2013, which means they would be the ones  
24 that would satisfy the 2014 demand, and so, you know, the  
25 fact that the other stations satisfy through 2012, all the

1 charts show that the demand exceeds the supply very quickly  
2 after that, so does this \$14 million really focus on trying  
3 to eliminate the problem in 2014? Or is it for some other  
4 timeframe?

5 MR. WARD: Well, first of all -

6 MR. EMMETT: This is Daniel Emmett. That was my  
7 question when I raised it earlier, whether it will go to  
8 2012, I was not clear, but that is why I was referring to  
9 this 2012 vs. the period after that, so thanks for making  
10 that very clear, Tom.

11 MR. WARD: Well, first of all, you have stated the  
12 affirmative, that it will take longer than two years per  
13 station and that, again, does not square with what the  
14 industrial gas companies have been telling us and what an  
15 entity in the field that presented at a California Fuel Cell  
16 Partnership workshop stated as an eight-month. We certainly  
17 do not want to take that to the bank, and we are not relying  
18 on that. As a matter of fact, we want to do everything we  
19 can to smooth the permitting for hydrogen stations and work  
20 with the industrial gas companies to do that. We do think,  
21 though, that the six or seven stations that are called for  
22 in the updated action plan could be more than met with \$19  
23 million this year. I think we can get significantly more  
24 stations than that, and probably more will be proposed in  
25 that. If it takes two years, then those are staged back

1 into the 2013-2014 timeframe and should meet that deficit  
2 as it is projected, will not only meet it, I think it is  
3 actually going to exceed it, having the capacity as the  
4 industrial gas companies are not taking the minimum of 100  
5 kilograms per day capacity; many of them are proposing a 200  
6 kilograms per day now and for reduced costs. So I am very  
7 optimistic that the \$19 million will be meeting the needs  
8 beyond 2012, even if the siting of those stations is  
9 delayed, which we are hearing news to the contrary on that.

10 COMMISSIONER EGGERT: So I think maybe I will jump  
11 in here and say, Tom, that your point is well taken, and I  
12 think maybe there is a need for sort of greater clarity as  
13 it relates to the use of the \$14 million going forward,  
14 based on some uncertainty as to what the 22 minus three for  
15 the transit, so 19 for light-duty vehicle infrastructure  
16 actually buys us in terms of number of stations capacity and  
17 timing of deployment.

18 MR. CACKETTE: Yeah, because clearly if we get  
19 more stations and more capacity for the dollars, then we are  
20 in better shape, but that is going to be determined probably  
21 after the Investment Plan 2 is finalized, so you know, we  
22 are not going to know, so it is kind of like which do we bet  
23 on, that we are going to get what we thought we got for \$19  
24 million before, or that we are going to get a deal and get  
25 twice as much and therefore, you know, it is hard to know

1 which of those to do unless you explicitly lay that out,  
2 that if that happens, well, we are in better shape, and if  
3 it does not happen, then we are either going to have to not  
4 meet demand, or we are going to have to put more money in.

5 COMMISSIONER EGGERT: And I think, you know, that  
6 is one of the things that does argue for, as we were talking  
7 about earlier today, some level of adaptive contingency  
8 relating to some of the funding categories. But, again,  
9 maybe I would suggest that we could have a further  
10 conversation between the two agencies to go through the  
11 numbers in more detail. Tim, go ahead.

12 MS. MONAHAN: Can we just -- Roland and I have to  
13 leave, so I just wanted to thank everybody, thank the CEC  
14 and we will look forward to the next iteration, next  
15 meeting. Thank you.

16 COMMISSIONER EGGERT: Thank you, Patty.

17 MR. CARMICHAEL: So I guess "significant" as a  
18 word has multiple meanings, but the staff's statement that  
19 the most significant changes were made to the natural gas  
20 section caught my eye and I just wanted to point out that  
21 there were some substantive changes made, from our  
22 perspective, and I wanted to talk a little bit about that.  
23 The text changed in some positive ways, some more discussion  
24 of the benefits of biomethane, not just in the Biomethane  
25 section, but as relates to the natural gas vehicle

1 development. There is also a new paragraph talking about  
2 the progress in the industry since the last plan was  
3 developed and I think that is significant because, at least  
4 to the industry, it is another argument supporting increased  
5 investment in natural gas because the industry is growing  
6 and you now have got more -- at least in the medium- and  
7 heavy-duty side -- more manufacturers bringing vehicles to  
8 market, making them available. That is significant. There  
9 is a new paragraph, and I touched on this this morning in my  
10 critique of Money Spent to Date, but there is a new  
11 paragraph talking about one of the major obstacles to  
12 expanding natural gas vehicle uses, the lack of public  
13 refueling infrastructure. Again, it is an obstacle, but  
14 from the industry's perspective today, that is not the  
15 primary issue, as I pointed out this morning. It is much  
16 more getting vehicles on the road than it is, you know, the  
17 industry worried about the infrastructure being developed or  
18 being accessible, that is coming along very quickly,  
19 actually. And if you look at it relative to all the other  
20 fuels and technologies that we are talking about here,  
21 natural gas is doing very well in the development of  
22 infrastructure.

23 COMMISSIONER EGGERT: Actually, Tim, maybe a  
24 question along those lines. In terms of the viability of  
25 the vehicle commercialization, maybe in terms of your

1 submission of comments, but could you speak to some of the  
2 specific either technical or cost challenges that are  
3 associated with taking that technology to sort of a  
4 commercial state? Is there a role for us to play in that  
5 aspect of it, aside from just straight up incentives? What  
6 is it that would enable that technology to be competitive at  
7 the vehicle level with conventional[phonetic]?

8 MR. CARMICHAEL: Yeah, I really think it is one  
9 issue and it is not a technological challenge, it is an  
10 economies of scale challenge. I think the more  
11 manufacturers that are producing the vehicles, the more  
12 competition there is, and we are seeing this in the heavy-  
13 duty sector, the prices are coming down now that you have  
14 got every major player in the market, where you did not have  
15 that sort of competition in the past. In the light-duty  
16 sector, you have got, I think, close to 60 different models  
17 available in natural gas vehicles in the light-duty sector  
18 available in Europe today, a number of them produced by U.S.  
19 manufacturers, sold in Europe, but not sold in the U.S.  
20 market, which is crazy. And in that market where you have  
21 got many more options, you are seeing more competitive  
22 pricing. But just looking at the California market, the  
23 more vehicles sold, the more the production costs will come  
24 down.

25 COMMISSIONER EGGERT: Thank you very much and I

1 would like --

2 MS. BROWN GARLAND: Commissioner Eggert, can I --  
3 I mean, this is actually one of the biggest obstacles that  
4 the propane industry is facing right now, is we have a major  
5 manufacturer who is sitting in Santa Ana, who is producing  
6 thousands upon thousands of propane retrofits for vehicles  
7 across the United States, except for the 13 states, or 12  
8 states, in Europe, Australia, and South America, and every  
9 place else they can use IMPCO's technology built in Santa  
10 Ana, California, except in California because the economies  
11 of scale have not made it worth them getting into the  
12 market, and there is that last hurdle that they have to  
13 spend all that extra money to get California served. And it  
14 kills us to see and it is a California company that has this  
15 technology available.

16 COMMISSIONER EGGERT: So the barrier that you are  
17 talking about is the certification, specifically?

18 MS. BROWN GARLAND: Right, to get that extra --

19 COMMISSIONER EGGERT: And being able to spread  
20 that cost over a large number of vehicles.

21 MS. BROWN GARLAND: Correct, and unfortunately  
22 most of the manufacturers deem it to be, you know, by the  
23 time that they would have to balance that out over however  
24 many units, the cost is just ridiculous.

25 COMMISSIONER EGGERT: What is the cost of

1 certification as a general --

2 MS. BROWN GARLAND: I would, well, I had heard  
3 upwards of a million dollars past the EPA cert to get the  
4 ARB cert, forgive -- I know my natural gas colleague  
5 probably has his own.

6 MR. CARMICHAEL: I have heard the same number. If  
7 I had to give you a round number, I would say a million  
8 dollars.

9 COMMISSIONER EGGERT: Okay. I want to welcome  
10 back my fellow Commissioner. So we are at, I would say,  
11 actually potentially finishing up the discussion about the  
12 second draft, the changes from the first to the second  
13 draft. Mike, did you have a comment?

14 MR. SMITH: Yeah, a quick follow-on question for  
15 Tim. The million dollars, what does that get you? Is that  
16 applied to one engine in one application, so if you take  
17 that engine, you put another application in, you have got to  
18 spend another million dollars to cert the engine?

19 MS. BROWN GARLAND: Yes.

20 MR. SMITH: Same engine, different application?

21 MS. BROWN GARLAND: Yes.

22 MR. SMITH: Could you get on to maybe a little more  
23 detail about that because that has always been a puzzlement  
24 to us, and if it is that kind of compounding cost for the  
25 same engine over and above US EPA cert, we would like to

1 have some clear information about that.

2 MR. CARMICHAEL: That is my understanding, as you  
3 just outlined it. But I am not an expert on this and I much  
4 prefer to talk to my member companies and get back to you  
5 with a more specific response, but we can do that in a week.

6 MR. SMITH: We would appreciate it. Jack,  
7 perhaps, is there some light you can shed on that?

8 MR. KITOWSKI: Well, a couple of things, I mean,  
9 part of the reason also is that the light-duty standards in  
10 California are more stringent than in the rest of the  
11 nation, so the threshold, the bar that companies would need  
12 to certify to are lower. But the standards were developed,  
13 you know, a number of years in response to testing programs  
14 that found that the after market systems were not  
15 necessarily as robust at that time, and they were not  
16 providing emission reductions, actually, in use. So they  
17 were strengthened and beefed up. You do not want to pay for  
18 a clean fuel that turns out it is not clean when it actually  
19 gets out there. So the standards are there to ensure that  
20 there are robust emission requirements, a threshold to get,  
21 and they have been a hurdle that a lot of manufacturers have  
22 not been able to get through. In response to your specific  
23 comment about, you know, do you have to certify again and  
24 again, generally a company like IMPCO would certify a  
25 system, and that system would generally go on a number of

1 different engine families. Now, how specific it needed to  
2 be tailored is a very complex sort of engineering oriented  
3 test plan; if they wanted to cover a very broad array, they  
4 would need to test more vehicles, durability as well as  
5 emission testing; if it was focused on a couple of  
6 applications, there would be a much smaller test program.  
7 So there is not an easy way to say in a meeting like this  
8 how many vehicles would you need, how broad of a test  
9 program in order to demonstrate.

10 MR. SMITH: Thank you.

11 MR. CARMICHAEL: Commissioner Eggert, I actually  
12 had two more comments if I could.

13 COMMISSIONER EGGERT: Sure, go ahead.

14 MR. CARMICHAEL: So in the tables that appear in  
15 the section on natural gas, the descriptions for the funding  
16 lines has actually changed a little bit. I am not sure if  
17 it is just shorthand, or if it is actually a substantive  
18 change. For example, in Table 17 in the first draft, and  
19 Table 16 in the second draft, the first line is "medium- and  
20 heavy-duty port trucks, school buses, and other vehicles,  
21 \$12 million." In the new report, it is "medium- and heavy-  
22 duty vehicles." Maybe that is just giving CEC more  
23 flexibility in how those funds are applied, but if it is  
24 specifically dropping port trucks or school buses, it would  
25 be helpful to know that. And that is just one example that

1 I think it would be helpful to clarify either today or as  
2 we go forward with this plan. Two other quick comments  
3 today, what continues to be missing from this discussion of  
4 natural gas is the potential for hybridization, and we have  
5 mentioned this both to Commissioners and to staff. Just  
6 like any of the other fuels we are talking about, we see  
7 great potential for hybridizing natural gas vehicles --  
8 medium, heavy, and light. And then, finally, on Table A-6,  
9 and I think this is -- or Figure A-6, excuse me -- I think  
10 this is what Tom Cackette was referring to before he left,  
11 but I want to get some clarification. It appears that the  
12 liquefied natural gas assessment is based on a scenario  
13 where a significant portion, if not all of that liquefied  
14 natural gas, is coming in from overseas, and that is why  
15 there is such a de minimus benefit to the LNG scenario. If  
16 that is not the case, if you are assuming that it is North  
17 American natural gas, or even LNG produced in California, it  
18 would be helpful to know that because my understanding from  
19 my member companies is that LNG, especially LNG from  
20 Northern America, has got significantly better GHG story  
21 than a 2 percent benefit over diesel. Thank you.

22 MR. SMITH: Just very quickly, you are correct and  
23 we are not assuming the importation of LNG.

24 MR. CACKETTE: You are not assuming it?

25 MR. SMITH: No.

1 MR. CACKETTE: So we should have a follow-up  
2 conversation about that, then.

3 MR. SMITH: Yes.

4 MR. CACKETTE: Thank you.

5 MR. SMITH: And on your comment about  
6 hybridization, it is perhaps slightly confusing how we have  
7 set this up, but we recognize the significant potential for  
8 greenhouse gas reductions for hybridizing natural gas  
9 trucks, natural gas vehicles, or vice versa, using hybrid  
10 electric vehicles that are being produced now, but then  
11 marrying them with a natural gas engine. We have included  
12 that discussion, or at least the acknowledgement of that in  
13 the hybrid truck section, in the electric drive. So it does  
14 not appear in the natural gas section for that reason, so we  
15 focused on it in the electric drive. But it is there and we  
16 recognize it, and we are strongly encouraging of it and  
17 marrying the technologies with the hybrid technologies, be  
18 they hybrid electric, or hybrid hydraulic with alternative  
19 fuels, is a very high priority for us.

20 MR. CACKETTE: Thank you.

21 COMMISSIONER EGGERT: Great point. Actually, I  
22 had Bonnie and then, yeah, we will go in that order.

23 MS. HOLMES-GEN: Okay, thank you. I am going to  
24 try to make my point concisely, and if I do not, maybe we  
25 will come back at it later. I think that, you know, there

1 is a lot of really good information in this plan, I really  
2 appreciate it. I am noticing that, you know, in the  
3 beginning you are talking more about the portfolio approach,  
4 and I understand, you know, we have kind of drifted that  
5 way. We started off, I think, at the beginning of this  
6 process, talking about the need to really have a focus on  
7 the long-term, most sustainable technologies, and trying to  
8 really push the funds out in a way that would make a near-  
9 term difference, and really ramp up those longer term  
10 sustainable technologies. And, I mean, how much did we  
11 allocate to the electric drive category last year, the last  
12 plan? I think it was in the \$40 million dollar range is  
13 what it looks like, and I notice that, you know, we are  
14 significantly down this year, you know, \$24, and obviously  
15 the Hydrogen category has been reduced. You know, of all  
16 the categories, I think we have the most understanding of,  
17 because there has been a lot of discussion here about what  
18 is happening with hydrogen and why we arrived at that  
19 number, but I guess that I am feeling, as a member of this  
20 Committee, that I really would like to get back to  
21 understanding the rationale for the amounts that we are  
22 putting in these categories. And I think it is great that  
23 we are putting money into the vehicle incentives, and that  
24 is fabulous, is there enough? I mean, are we going to run  
25 out of money in the next year? Do we know? And what is the

1 back-up plan? And the infrastructure, that is a critical  
2 need, clearly, and there has been a lot of discussion, a lot  
3 of venues that I have been in about these issues of getting  
4 EV ready. You know, is \$3 million really enough? We have  
5 got a good chunk of money here, and are we pumping enough in  
6 to make a near-term difference and ramp up to the levels  
7 that we need? So I do not have all of an answer here, but I  
8 think this is an important point from the perspective of  
9 people who are on this committee and trying to make sure  
10 that we are really getting the best bang for these bucks  
11 here, that we are making a difference leveraging the funds  
12 in a way that is going to meet some of the milestones that  
13 we have for the ramp-up of these specific technologies and  
14 getting the numbers of vehicles on the road, for example,  
15 that we want to see. So I know that is kind of a big  
16 question and maybe it is something that I need to have some  
17 follow-up.

18 VICE CHAIR BOYD: Bonnie, it might be a very  
19 simple question. The first plan was two years' worth of  
20 money, this plan is one year's worth of money, so all the  
21 numbers are going to be less.

22 MS. HOLMES-GEN: No, I understand that. I am not  
23 only focused on the difference between that one and this  
24 one, I mean, that is not the only criteria I am putting out  
25 here, I am saying that I do not think there is enough - you

1 know, again, I appreciate the tremendous work, I am not  
2 trying to be overly critical, but I do think we need to find  
3 a way to add in a little more information about why we are  
4 arriving at these amounts and how these amounts tie in to  
5 the milestones we are trying to reach, you know. I think we  
6 have a good rationale here, we are spreading the money out  
7 probably a little more than I think what was maybe  
8 anticipated at the beginning of the process, all good  
9 technologies, but, again, you know, there is a need to  
10 really focus the expenditures, too, and make sure that -- I  
11 mean, I do not want to repeat, I think I have made the  
12 point, but I think that especially in the electric drive  
13 category, we could use another check-in about the milestones  
14 we are trying to reach and how these allocations are getting  
15 us there.

16 COMMISSIONER EGGERT: Uh huh, just a quick comment  
17 on that, on the electric drive component, I think there is a  
18 need for a greater level of information relating to the  
19 specific deployment plans from the automakers in terms of  
20 what quantity of vehicles we might expect to be deployed,  
21 and what time frames, and I think that can definitely help  
22 us in planning for this next round. I also think, you know,  
23 we are learning that the program is probably going to have  
24 to deal with from time to time a windfall of sorts, like I  
25 am trying to remember our \$8 million that we provided for EV

1 charging in Southern California is matched by how much, \$40  
2 million from the Feds? And, of course, that is a great  
3 thing, you know, that we are able to take advantage of that,  
4 and then ask the question, okay, now that we have had that  
5 windfall, how would and how should that affect our planning  
6 process as it relates specifically to allocation? But those  
7 are all good questions.

8 VICE CHAIR BOYD: Well, and I guess Commissioner  
9 Eggert touched upon, in a different way, a thought that was  
10 going through my mind, and kind of what we have to think  
11 about is where should government spend its money vis a vis  
12 -- or California spend its money -- vis a vis where other  
13 people are spending their money, or other monies are going.  
14 And so, as Commissioner Eggert said, some of our thinking is  
15 influenced by the fact that somebody else like the Federal  
16 government may put a big slug of money into a certain arena,  
17 so our scarce resources can go in other directions. If in  
18 the year, in particular, there seems not that much more we  
19 can do, and also, you know, where is the private sector  
20 putting its money? And where can people stand on their own  
21 two feet? Where should the industry, itself, be spending  
22 the money and not us spending money for them? So it is kind  
23 of an amalgam of all those kinds of things. And I must  
24 confess it is hard to explain all that in a plan that is not  
25 200 pages thick. But, I mean, we all appreciate those kinds

1 of questions because it knows very well, because some of us  
2 are really dedicated to some of the very things you are  
3 talking about and are pretty confident we have got a lot of  
4 money going there, yet we really love electric cars and  
5 electric drive, and would hope that folks would understand  
6 where we are going. But early on you said something about  
7 being concerned about portfolio approach; I do not think we  
8 have ever strayed away from the policy of this organization  
9 to strive for a portfolio of alternative fuels and of  
10 alternative vehicle technologies, and I do not think that  
11 policy of this agency varies at all with the policies of  
12 other programs, of other agencies in the state, and other  
13 goals and objectives of the state. You know, I mean, I  
14 expect various people to lobby heavily for their  
15 constituency group, or the objectives of their constituency  
16 group, and then you need to recognize we need to balance  
17 these scarce funds in meeting all the goals and objectives  
18 of the state. We have not abandoned the Low Carbon Fuel  
19 Standard, or AB 32, or the energy security/energy diversity,  
20 or all bio energy goals of either this administration or the  
21 state. So it is a portfolio and it is balanced, and it is  
22 aimed at meeting all the goals and objectives, and we do not  
23 -- we have not forgotten the long discussions last year  
24 about how far out we should stretch, and the agreement, you  
25 know, we are aiming at the 2050 goals. But there are lots

1 of stepping stones between here and 2050. And I heard it  
2 today, I mentioned, you know, going heavy after biomethane  
3 does not detract from the renewable hydrogen goal, for  
4 instance, or going as fast as you dare go, but no faster,  
5 with incenting various technologies or putting in fueling  
6 infrastructures, you know, leaves a little bit of money for  
7 some of the other also desirable technologies along the way.  
8 And the rest of it is the free market has got to get in  
9 there and compete and show us what they can do to meet those  
10 goals and objectives. So we do not want to shut out any  
11 particular technology. You know, I mean, we put a lot of  
12 money in for hydrogen and the Feds cut our legs out from  
13 under us by the policy that they adopted, and they have  
14 changed, and we have changed, and the automakers' views of  
15 how many cars they can get out, how fast, have changed. And  
16 we tried to balance all that. So, I mean, it is just a  
17 rather academic statement and maybe Chuck and staff have  
18 some more specifics they might want to mention.

19 MS. HOLMES-GEN: I appreciate that. I will want  
20 to just keep following up on this discussion of connecting  
21 it to the milestones.

22 COMMISSIONER EGGERT: Okay, I had Lesley and then  
23 Peter.

24 MS. BROWN GARLAND: There was our friend who gave  
25 a public comment earlier from Clean Fuel Connection,

1 mentioned the whole pushing the rock up the hill, and the  
2 longer I sit here, the more I feel like we are going like  
3 that today. I want to go back to what we were talking just  
4 a few minutes ago regarding the hurdle for getting the  
5 California certifications, and under no circumstances do I  
6 want anyone to think that I am not an advocate for what the  
7 Air Resources Board does, and the hurdles they have placed  
8 out there, I have witnessed what they have done and they  
9 push rocks up hills every day. I think there is a small  
10 staff that is dedicated and underworked and overpaid --  
11 overworked and underpaid, sorry! And they are drinking from  
12 the fire hose, they get so many requests and they have so  
13 little time to handle it. But I guess what worries me is  
14 that I guess Tim and I both know that there are technologies  
15 that are out there that are here and now technologies being  
16 used around the world, that could be used here, but maybe in  
17 the future, maybe not this plan, but maybe in future plans  
18 to consider adding in some sort of R&D line item to help  
19 some of these companies make that last leap of faith towards  
20 a ARB cert that we will get them not only in California, but  
21 I guess 11 or 12 other states, depending on the count. And  
22 I also, another thing -- I think Tim and I have been  
23 conspiring today -- I am extremely grateful for the \$2  
24 million that we were given in the last Investment Plan for  
25 school bus incentives, I cannot wait for that money to get

1 on the street, and I am extremely grateful that there is \$3  
2 million allocated this time for the small- and medium-duty  
3 vehicles. And, again, I hope that once we invent the wheel  
4 for the school bus, that we can roll the wheel again and get  
5 that \$3 million, assume it gets the final blessing, out even  
6 sooner. It is a chicken and the egg proposition that we  
7 have to make people believe again in these vehicles and in  
8 this field. I am told stories by some of the CEC staff of  
9 the glory days back in the '70s and '80s and even early '90s  
10 when propane vehicles were everywhere, and unfortunately  
11 that is becoming a distant memory to many people, and I  
12 think we can do it again, and especially since it is a here  
13 and now technology, and I think there are several of us  
14 around this room that have here and now technologies, but we  
15 just need that one little thing. And our industry is trying  
16 to step behind what you guys are doing, and I am cautiously  
17 optimistic that by the late summer I will have my own  
18 incentive program to match your incentive program, not  
19 dollar for dollar, but I can at least put a little bit of my  
20 money behind a little bit of your money and see how far we  
21 can take it. And I think you have given us a little bit of  
22 bravery to put our money where your mouth is, too. So thank  
23 you. And let's try to get this out as quick as we can.

24 VICE CHAIR BOYD: An anecdote for you. Propane in  
25 another name is LPG, as defined as Liquefied Petroleum Gas,

1 and you cannot believe the number of people who think this  
2 is petroleum, therefore it is "oil." Some very high level  
3 officials believe that, so you have to take them through the  
4 fact that it is a gaseous material derived, some of it, from  
5 the same well out of which comes crude oil, but it is not  
6 the same thing, nor is it a refined product, etc. etc.  
7 Maybe you have a little bit of an extra large rock to push  
8 up your hill.

9 MS. BROWN GARLAND: Yes, every day.

10 COMMISSIONER EGGERT: Peter?

11 MR. COOPER: Yeah, I just wanted to say that I  
12 believe that workforce development underpins so many of  
13 these projects, and I think it is a bad idea to strike out  
14 to zero out the funding for it in this next cycle,  
15 especially given the fact that Stimulus money is drying up,  
16 and that there really was a very great example of  
17 collaboration and efficient use of 118 money in the last  
18 cycle with the workforce dollars. So I just wanted to just  
19 bring that up on the table again and say, from my opinion, I  
20 believe it is a bad idea to take out all the funding for  
21 workforce. It is something that is critical for the overall  
22 program, and I think it should have some funding going  
23 forward.

24 VICE CHAIR BOYD: Peter, could you and folks maybe  
25 help our staff a little understand what might the next

1 increment be for? There could be a feeling that, because  
2 they really broke their pick and bent over backwards,  
3 frontloaded things this year, put it at the front of the  
4 train, and what have you, that there may not be a vision of  
5 what might be needed in this very next year vs. what might  
6 be needed in the subsequent year. And I will confess, you  
7 know, a little ignorance on my part, I guess we did so much  
8 as an agency with this money, ARRA money, and everything  
9 else in that arena, it is kind of like -- I would not say it  
10 was a lifetime investment, but it was a huge investment, and  
11 maybe we just lack understanding of what you could do in the  
12 single forthcoming year with the 118 money. We probably  
13 need a little help understanding that, or at least I do.  
14 And, you know, the Commissioner and I have not made our  
15 decisions yet and we could use some help, quite frankly.

16 MR. COOPER: I will go ahead and let Barbara  
17 Halsey respond because she has a lot of depth in this area.

18 MS. HALSEY: Yeah, Commissioners, I appreciate  
19 Peter's comment. I think that we are just beginning to  
20 understand, I mean, there really is the timing issue here,  
21 how do we time the supply of workforce just in time to meet  
22 the economic demand as the economic demand emerges? And the  
23 money that the Energy Commission partnered with our  
24 workforce dollars over the course of the past year has been  
25 instrumental first in funding those platform programs that

1 we can build upon to ensure that, as the industry emerges,  
2 grows, and changes, we are growing and modifying training  
3 programs that will produce the kind of talent necessary. So  
4 there is a bit of a crystal ball effect here that we are  
5 dealing with. I do think one of the promising partnerships  
6 that we have is coming out of the Regional Industry Clusters  
7 of Opportunity Grants that we just launched, and we have  
8 just started meeting with 10 regional collaboratives across  
9 the state; out of those 10 regional collaboratives, we have  
10 identified four that have strong emerging transportation  
11 sectors, so I think there is a nexus that we need to get to,  
12 but I think it is much like the accountability discussion,  
13 and the funding decision making discussion that was going on  
14 earlier; a lot of what we need to do in workforce  
15 development is going to be emergent as we become more  
16 familiar with how the industry is growing, where the  
17 promising practices are, where the regions are that are  
18 really leaders in the new technologies. So I think it is  
19 going to be an ongoing discussion. I would be remiss in  
20 saying there is a dollar amount that we can attach to that,  
21 but I will say that, through the Green Collar Jobs Council  
22 and the California Workforce Investment Board, and with our  
23 Partners at Labor, we are very anxious to continue to work  
24 with you and your staff on identifying what those needs will  
25 be, and making sure that we are timing the preparation of

1 the workforce to the demand of industry.

2 COMMISSIONER EGGERT: Just a quick comment.

3 Thanks for those comments and I think it has been a great  
4 partnership that we had with your agencies, and in  
5 particular with this program and with the other Stimulus  
6 programs, so I think that is something that we want to  
7 continue that collaboration and partnership into the future  
8 and look forward to the more specific suggestions or  
9 recommendations. I guess one question I did have with  
10 respect to the current funding activities is to the extent  
11 that it is going to result in durable programs and  
12 curriculum that will be able to be sustained through your  
13 sort of annual tuition and fees and things like that  
14 associated with these programs, and that might be  
15 information that would be useful, as well, to have.

16 MS. HALSEY: Right. It might not be a bad idea  
17 for us to just sit down and talk about the workforce  
18 strategy that we are using and how we -- a couple of things,  
19 I think if the Commissioners are interested, we would  
20 certainly be happy to have Collaborative Economics, who is  
21 serving as our principal consultant on our Regional Industry  
22 Opportunity Grants. We would be happy to have them come in  
23 and show you some of the initial findings of the Industry  
24 Clusters of Opportunity that they have identified within the  
25 green segment, and how those relate to the work plan that

1 you have. In addition, our strategy, the Workforce  
2 Investment Board, is to get our regions to do effective  
3 planning and good diagnostics of what is going on within  
4 their economies, so that we are not constantly having to  
5 provide the kind of seed money necessary to keep programs  
6 going, but that they really begin aligning their local and  
7 regional investment strategies to support the kinds of  
8 programs essential to support the businesses that are  
9 present in those economics, so ultimately our seed funding  
10 becomes money that lays the foundation and supports the  
11 development of the rights kind of workforce support  
12 frameworks around those industries that are present in that  
13 economy, and then that is sustained by local and regional  
14 investment. We certainly do have a shrinking pool of  
15 resources, we were resource rich with Recovery Act funding,  
16 we are headed toward a pretty steep cliff right now in terms  
17 of the funding we have available, ultimately, with a 10  
18 percent reduction in our overall funding over the course of  
19 the next funding cycle, and anticipated reductions the year  
20 after that. But we also see huge value in investing and co-  
21 investing with our partners, so we do have plans to invest a  
22 portion of the Governor's discretionary funding in some kind  
23 of green workforce training, and I am sure that it will  
24 continue to align with your priorities.

25 VICE CHAIR BOYD: I think I would like to take you

1 up on your offer to have your folks come and talk to us  
2 more, and I would like to invite the ARB, our friends at the  
3 ARB, into this dialogue --

4 MS. HALSEY: That would be fantastic.

5 VICE CHAIR BOYD: -- as well, because I think we  
6 kind of made a deliberate split in who was going to do what  
7 in the first Investment Plan period of time. The ARB does  
8 not have to do an Investment Plan or have an Advisory  
9 Committee, but they have license to spend money on workforce  
10 training in the law. I think they probably rely pretty  
11 heavily on us to take care of that, at least in the first  
12 go-round, just like we relied pretty heavily on them to take  
13 care of vehicle incentives for customers and what have you  
14 in the first go-round. But as we look to the future, I  
15 think both agencies need to look at their priorities and  
16 where they want to spend their money, so we should bring  
17 them up to speed, as well.

18 MS. HALSEY: Right. And in terms --

19 VICE CHAIR BOYD: When we have a meeting, we would  
20 like to be sure that, Jack, you and your folks are there.

21 MR. KITOWSKI: Yeah, can I say, we did, we  
22 intentionally pulled back when you pushed forward as hard as  
23 you did, and we would be very happy to engage in a  
24 discussion at this time.

25 MS. HALSEY: Great. We will talk offline and make

1 sure that we get something set up.

2 VICE CHAIR BOYD: Thank you.

3 COMMISSIONER EGGERT: Mark?

4 MR. LEARY: Before we go to public comment, I just  
5 wanted to add two cents, I would be remiss by letting the  
6 opportunity pass without expressing my appreciation for the  
7 Commissioners' support and the staff's support here at the  
8 Energy Commission for the concept of including the capturing  
9 of the organic waste stream for energy production, fuel  
10 production, in the Biomethane section. I echo Tim's  
11 comments about "don't sell yourself short," there were  
12 significant changes, maybe they were not in the dollars  
13 amounts, but some of the wording change makes a whole lot of  
14 differences, local planning decisions get made about siting  
15 some facilities that may potentially be controversial, but  
16 when the Energy Commission speaks about the value of these  
17 anaerobic digestion facilities and such, I think that has a  
18 lot to help, a lot to contribute to the success of siting  
19 these facilities. So, again, I want to thank you for your  
20 inclusion and support of some of these concepts. I think  
21 the challenge returns to us and the Air Board to better  
22 define the benefit to carbon intensity and better define the  
23 number associated with carbon intensity for greenhouse gas  
24 reductions associated with the organic component of the  
25 waste stream and turning them into energy and alternative

1 fuels. That is a number that has yet to be defined, and we  
2 need to help them get to that number so that it can be  
3 quantified and move forward. So thank you.

4 VICE CHAIR BOYD: Thanks for your comments, Mark.  
5 You know you have got a strong advocate in me in this bio-  
6 energy arena, and I seem to have been on the rubber chicken  
7 circuit a lot lately and delivering that message. I think  
8 Ms. Halsey and I were with local government folks here  
9 several weekends ago, and I do not think I missed an  
10 opportunity to talk about the virtues of attacking the waste  
11 stream problems and turning them, instead, into positives in  
12 terms of energy. And we need to do a lot more, and we  
13 probably need to enlist the help of folks sitting around  
14 this table with respect to addressing in the Legislature a  
15 lot of the unfortunate and artificial hurdles that are put  
16 in the way of even delving deeper into this particular  
17 arena. I know we might have some success this year with one  
18 piece of legislation, AB 222, although I understand it has  
19 been labeled as a partisan political trick by some people in  
20 the last couple of weeks, it is not. It is just a sincere  
21 desire to get at another piece of fuel, etc. So we have got  
22 a lot of issues to delve into with regard to that, and  
23 probably folks here could help us in the future. Yes, Tim?

24 MR. CARMICHAEL: I have a process question. It  
25 should not surprise you that I am going to continue to make

1 the case for doubling the natural gas money -- no, but --

2 VICE CHAIR BOYD: Not at all surprised.

3 MR. CARMICHAEL: -- but more seriously, I  
4 mentioned a couple times today that our industry would  
5 strongly recommend a shift in the allocation that the staff  
6 has proposed in this draft. What is the best way to  
7 communicate that? I mean, I have said a couple times today  
8 we are going to submit written comments. Is a follow-up  
9 meeting appropriate? I mean, what would you like? Or what  
10 would the staff like for that educated input or from the  
11 various advisory panel members?

12 COMMISSIONER EGGERT: Chuck, I was going to  
13 suggest you go back to the slide that has all the dates on  
14 it and talk about kind of where and how the input would best  
15 be provided.

16 MR. CARMICHAEL: Thank you.

17 MR. MIZUTANI: Oh.

18 COMMISSIONER EGGERT: One more, there you go. Do  
19 you want to give kind of an overview of the mechanisms by  
20 which people can provide input?

21 MR. MIZUTANI: Sure. So after this Advisory  
22 Committee meeting, we will be going back and really just  
23 collecting and analyzing the comments and questions and for  
24 the process of revising the second staff draft Investment  
25 Plan, however, that will not be used to receive comments on

1 May 20<sup>th</sup>, 25<sup>th</sup>, and 27<sup>th</sup> from the public. We will finalize  
2 our draft after the third public workshop and then basically  
3 be working with the Committee to produce their committee  
4 Investment Plan, so the process is either comments that were  
5 made today, any comments or information that we put in the  
6 docket, you can participate in any of the workshops, or you  
7 can provide us with verbal information. And I think that is  
8 one of the comments, I guess, is in terms of comments, if we  
9 had more specificity in terms of what you would be  
10 suggesting and recommending, that would be very important  
11 for us because basically what we try to do in the Investment  
12 Plan is provide the rationale that would lead to  
13 consideration of funding. So right now, we try to at least  
14 identify some information in the Investment Plan is more as  
15 informational background, not necessarily that it is going  
16 to lead to investment at this point. But I think the  
17 important thing is that we have the rationale available that  
18 we can sort of present in our Investment Plan. So either  
19 the workshop, docketed, or meeting to provide us with that  
20 kind of information would be very useful.

21 MS. BAROODY: And I just want to add one thing.  
22 This is Leslie Baroody. I would just say June 7<sup>th</sup> would be a  
23 good date to submit anything to the docket in time for the  
24 committee report, so that would be a good cut-off date in  
25 order to make the draft and go through internal reviews.

1                   COMMISSIONER EGGERT: And I would say, you know,  
2 the sooner the better, and I think the June 7<sup>th</sup> date is a  
3 good date to target for anything that you want to have sort  
4 of seriously considered by the committee as it moves toward  
5 the final proposed Plan. And I think by that time we will  
6 have had the benefit of all the public workshop input, as  
7 well.

8                   MR. CARMICHAEL: Thank you.

9                   COMMISSIONER EGGERT: Okay, I guess, you know,  
10 just to be mindful and also respectful of the public that  
11 has come here and sat patiently listening to this good  
12 discussion, I do want to give one more opportunity for any  
13 of the Advisory Committee members who feel they have a  
14 burning comment or question before we move to the public  
15 comment. And seeing none, okay, I am just going to go  
16 through and ask folks to come up and speak. I think we  
17 would like to have you limit your comments to three minutes,  
18 no more than five at the most. And, again, also there is  
19 the opportunity to provide input through the docket, as  
20 well, and written form. And so the first one I have here is  
21 Adam Walter from AE Biofuels.

22                   MR. WALTER: My name is Adam Walter with AE  
23 Biofuels. I would like to first thank the Commission for  
24 the opportunity to speak here today. I just wanted to  
25 comment on a couple things related to the AB 118 Investment

1 Plan. First of all, let me introduce my company, AE  
2 Biofuels, Inc., we are headquartered out of Cupertino,  
3 California, and we have a patent pending cellulosic ethanol  
4 technology which enables the replacement of up to 30 percent  
5 of the inputs in existing corn ethanol plant with cellulosic  
6 waste feedstocks. So our interest in attending this hearing  
7 today was to find out what the funding allocations are,  
8 specifically related to ethanol production in California and  
9 advancing the state's renewable energy and advanced biofuel  
10 technology goals, and also to comment briefly on some of the  
11 open solicitations. So I know I have to keep it brief. I  
12 just wanted to comment first on the solicitation and say  
13 that we were at the workshop on Tuesday of this week with  
14 the biofuel production plants solicitation, which is  
15 available to you in, I guess, 09-06-04. One of the issues  
16 that came up at that hearing was the treatment of  
17 intellectual property, which as you know is a large part of  
18 what the private sector is bringing to this challenge,  
19 right? And I just wanted to briefly say that I think that  
20 the way the Commission is choosing to count matching funds  
21 does not necessarily reflect the value that has been, you  
22 know, the value of the investment into the intellectual  
23 property related to these technologies. So I want to  
24 encourage the Commission to take a closer look at how you  
25 value intellectual property, specifically with regards to

1 advanced biofuel production technologies, and other  
2 advanced technologies, because for the purpose of some of  
3 these solicitations, which are designed to further the  
4 advancement of these technologies, the investment generated  
5 previous to the start of the program would not qualify as  
6 match; so, for example, our cellulosic ethanol technology,  
7 which we have spent the last 10 to 15 years developing,  
8 would not count as far as a match in this program. So  
9 something to think about, I know there are ways to value  
10 intellectual property and I am not going to get into that  
11 here, but I would encourage the Commission to take a closer  
12 look at how you value that in the context of these --

13 COMMISSIONER EGGERT: I would ask if there is  
14 precedent in other programs, other government funded  
15 programs, if you have information that would relate to how  
16 you would go about actually doing that, that would be useful  
17 to submit.

18 MR. WALTER: Absolutely. I would be happy to  
19 provide that. Actually, we are taking the opportunity to  
20 comment on the AB 118 program and writing a docket, so we  
21 will have it for you in the next week and we will include  
22 that.

23 VICE CHAIR BOYD: That would be good to know  
24 because it is kind of my longstanding understanding that  
25 California's rules, regulations, etc., prohibit us using --

1 for any kind of program - using past expenditures as a  
2 match for current and ongoing programs. I may be wrong on  
3 that, but that just comes to light.

4 MR. WALTER: Well, I know there was a mechanism  
5 that we had discussed at the workshop regarding the  
6 treatment of some of the past expenditures on a pro rated  
7 basis, so I think we should be able to come to some  
8 understanding about the treatment of intellectual property  
9 because it is such a significant contribution to these  
10 programs. So we will discuss that offline.

11 COMMISSIONER EGGERT: Thank you.

12 MR. WALTER: Yeah, absolutely. The other comment  
13 I wanted to make is just a general comment about what is  
14 being discussed here today. I again want to thank all the  
15 Commissioners for their input and members of the Commission,  
16 as well. But I think that, in terms of furthering all of  
17 our goals for advancing the state's in-state production of  
18 advanced biofuels, it is important that, you know, we  
19 address these concerns quickly and we get these  
20 solicitations out on the street soon, and award the money  
21 soon. I mean, I think everybody knows that, but I just want  
22 to impart a sense of urgency to everyone here, that out in  
23 the industry right now, it is very difficult. So take that  
24 for what it is.

25 VICE CHAIR BOYD: Yeah, we take that seriously and

1 we feel your pain --

2 MR. WALTER: Good, absolutely. And then I also  
3 just wanted to remind everybody that --

4 VICE CHAIR BOYD: -- but the rock keeps rolling  
5 downhill on top of us, as well.

6 MR. WALTER: -- you know, in terms of doing what  
7 some of these goals are, which is, as far as the California  
8 Producer Incentive Program, increasing operational  
9 efficiencies of existing ethanol production facilities and  
10 the concern over incentivizing ethanol production in the  
11 State of California, in the face of criticism over water  
12 usage, etc., AE Biofuels does have a patent pending on  
13 cellulosic ethanol technology that enables the replacement  
14 of up to 30 percent with the cellulosic. We are ready to  
15 deploy that technology today. So we look forward to the  
16 opportunity to continue working with the Energy Commission  
17 on transferring our knowledge and expertise to existing corn  
18 ethanol facilities within the state and helping us  
19 transition us to low carbon fuels. So thank you.

20 COMMISSIONER EGGERT: Thank you very much. Next,  
21 I have Eileen Tutt from California Electric Vehicle  
22 Coalition.

23 MS. TUTT: Good afternoon. My name is Eileen Tutt  
24 and I am with the California Electric Vehicle -- Coalition  
25 -- sorry, I am new at the California Electric Vehicle

1 Coalition. And I was at the California Environmental  
2 Protection Agency, so CAL EVC and CAL EPA, sometimes I am  
3 still getting confused. But I just have a couple of quick  
4 comments, and they are specifically on the Investment Plan  
5 for 2011 as it regards electric drive, so very very  
6 untargeted comments. First, I want to say that the \$3  
7 million for infrastructure is not enough, and we know that,  
8 and we know that we probably need about double that, and  
9 even with double that, that still is only equal to what was  
10 handed out in the last couple of years, and we expect a  
11 large number of vehicles to be coming to the state over the  
12 next couple years, so we are thinking that \$6 million is  
13 about the minimum we would need, but we are going to work on  
14 giving you some numbers that you can use and more accurately  
15 defend the Investment Plan for increasing beyond the \$3  
16 million, so we have comments in to you about the \$3 million  
17 not being enough, but we will provide you with more  
18 specifics about what we think might be enough. The other  
19 thing I just wanted to share with you, or put out to you  
20 today is an idea, and I would like to again further discuss  
21 it with you. Right now, there is a bill, there was a bill  
22 that was passed, and is now a statute, it is AB 811, and it  
23 allows local governments to provide low interest loans to  
24 people within the community, and it is all voluntary, so  
25 nobody is forced to do this. If they upgrade their homes

1 for energy efficiency upgrades or renewable distributed  
2 generation, they can get this low interest loan, and then  
3 they pay it back through their property tax, so they  
4 essentially pay as they save, so it is not a big lump sum in  
5 the beginning which, having installed a solar system myself,  
6 can be kind of frightening, but you pay as you go kind of  
7 thing. And it is a very good idea, I think, and I would  
8 like to consider or at least put this out for the committee  
9 and the Energy Commission to consider the idea of looking at  
10 could we add home recharging to those two categories, so we  
11 would have distributed generation that is renewable, energy  
12 efficiency, and then home recharging, and there are a lot of  
13 synergies there because, if you are going to put in a home  
14 recharger and a solar system, for example, at the same time,  
15 then you may want to adjust the size of your solar system.  
16 So there are synergies among these three categories, if you  
17 will, efficiency distributed generation that is renewable,  
18 and home recharging. So I would like to throw that out  
19 there as an idea and have further discussions with you. I  
20 think it might be a way to incentivize home recharging  
21 without spending a lot of money and perhaps collaborate with  
22 local government. And then, finally, I want to say that --  
23 and I missed Chuck's presentation, but I did look it over  
24 online, and it looks like you are considering workforce  
25 training for at least electric vehicle infrastructure, or

1 electric drive, in general, and I think that would be a  
2 very good idea. I think there are going to be a lot of new  
3 good jobs around this new technology, and I like the idea  
4 that you are considering education and workforce training in  
5 staffing for local governments, as well as the notion of a  
6 strategic plan for electric drive, because, having been  
7 through the late '90s and early 2000s, we have another bite  
8 at this apple, and I think it would be easy to fail again in  
9 deploying electric vehicles, so I would like to do  
10 everything we can to make sure we are a success this time,  
11 and I think a good strategic plan would be a start. So I am  
12 glad to see that that is at least one of the things that the  
13 staff is considering. And thank you very much.

14 COMMISSIONER EGGERT: Actually, just a quick  
15 question, Eileen. On the information provided to assist in  
16 justifying a higher investment on the infrastructure, would  
17 that include detail of vehicle deployment?

18 MS. TUTT: I think, you know, we do not have  
19 access to that information, but what we have is we can give  
20 you sort of what I would say are combined numbers that will  
21 give you an idea of how many vehicles we expect will be  
22 deployed, and what we would have is sort of a low, medium,  
23 and high, so we are not going to give you exact numbers, I  
24 do not think we can, to be honest, it is not our  
25 intellectual property to distribute. But we can give you

1 estimates, low, medium and high, that we have based on  
2 working with the automakers and the current -- I mean, they  
3 are partnering, as you know, with many of the local  
4 governments in different parts of the state, and they know  
5 how many vehicles they are planning on deploying in those  
6 parts of the state, so we could combine that information and  
7 probably give you at least a rough estimate -- better than  
8 what you have now, and it will definitely justify at least  
9 doubling the amount of money.

10 COMMISSIONER EGGERT: Thank you -- I think that  
11 doubling seems to be the general recommendation for all  
12 categories.

13 MS. TUTT: Yeah, Tim and I have been talking.

14 COMMISSIONER EGGERT: Which, you know, I guess one  
15 question would be if we can convince the Legislature to  
16 double the Budget, then perhaps we might be able to satisfy  
17 all the requests.

18 MS. TUTT: Well, we will try to help you with  
19 that.

20 COMMISSIONER EGGERT: Okay. I think next up I  
21 have John Marsh from Webasto Products. I do not know if I  
22 said that right.

23 MR. MARSH: Hello, my name is John Marsh. I am  
24 with the company, Webasto Products. We manufacture anti-  
25 idling solutions. I am looking at a suggestion for

1 innovative technologies and advance fuels for idle  
2 management technology. The '07 and newer trucks can now  
3 idle in California, so we are looking at a truck idle  
4 management technology program that improves the efficiency  
5 of petroleum and non-petroleum fuel engines to increase fuel  
6 savings and greenhouse gas emissions, improves above current  
7 levels, the program would provide funding to on-road truck  
8 owners and operators to implement Webasto's blue coal hybrid  
9 shore power technology that will provide on-road trucks with  
10 hotel on-load capacities without diesel particulate filters  
11 or dedicated deep cycle batteries. As well as being CARB  
12 approved, EPA verified, we would like for you guys to  
13 entertain this on your next docket. Some of the benefits,  
14 it helps us with our dependency on foreign oil, it does not  
15 use any fuel, you are able to utilize it at off-peak hours,  
16 to use the energy to plug in after -- you know, you can use  
17 this energy while the vehicle is driving down the road, or  
18 you can use it plugged-in as it is parked. So basically I  
19 would just like to thank you for taking the time to let me  
20 entertain this opportunity. I look forward to working with  
21 you and your staff, possibly.

22 COMMISSIONER EGGERT: Thank you very much.

23 MR. MARSH: Any questions?

24 VICE CHAIR BOYD: This is big in the news of our  
25 ARB friends, so maybe they want to talk to you more, or

1 maybe they know all about your technology.

2 COMMISSIONER EGGERT: Catherine Dunwoody from the  
3 California Fuel Cell Partnership.

4 MS. DUNWOODY: If you do not mind, I will sit  
5 down. Good afternoon, thank you for the opportunity to  
6 comment today. The first thing I would like to do is to let  
7 you know that next week we will be publishing our Progress  
8 and Next Steps Report to the Action Plan that we published  
9 in February of last year. This is a document that  
10 highlights the progress in both the technology in the  
11 vehicles, for fuel cell vehicles, codes and standards  
12 development work, and station deployment in California,  
13 since we published the Action Plan in February. The report  
14 also contains our latest vehicle survey numbers from our  
15 automotive numbers, and those numbers are consistent with --  
16 the timing is a little shifted from what the Commission or  
17 the Air Resources Board requested in their surveys, but we  
18 would like to request that those updated survey numbers be  
19 used in the Investment Plan, as we believe they are the most  
20 current and accurate information. Also included here is a  
21 list of next steps, we have specific recommendations on  
22 stations that are needed immediately to support the early  
23 market roll-out for fuel cell vehicles. This is a consensus  
24 of our automaker numbers, they worked very hard to come to  
25 agreement on exactly where do they want to see these next

1 stations located, there is a list of seven in here, with  
2 four upgrade or expansions for four existing stations that  
3 are already in California, so a total of 11 stations that  
4 need immediate investment, and we anticipate and we suggest  
5 that this should be the focus of any government funding that  
6 is available, including \$19 million from the solicitation  
7 that is coming up here, hopefully, in the coming month. As  
8 well, this report highlights the fact that there is further  
9 work ongoing for the automakers collaboratively to identify  
10 the needs for the next phase of stations, and these are the  
11 stations that we would anticipate being funded with the  
12 2010-2011 funding. So that work is ongoing and I am really  
13 pushing them to get that detail finalized as soon as  
14 possible so we can provide it to the staff. In addition, of  
15 course, there is transit addressed in here and pleased to  
16 hear that some of the \$22 million funding from the 2008-2010  
17 is geared towards transit because there is an immediate need  
18 in Oakland to support the AC Transit in the Bay Area Fuel  
19 Cell Bus Program. Okay, so that is the Progress and Next  
20 Steps Report. Going back to some comments that I made back  
21 in February, I just want to highlight that we did provide  
22 the staff with some very detailed comments on their  
23 assessment of projected supply and therefore the need for  
24 additional stations, and those tables, C-1 and C-2. I noted  
25 in the Investment Plan when I read it earlier this week that

1 none of those changes had been accepted, so we did talk to  
2 staff and we understand maybe there were some things  
3 overlooked or due to staffing changes, that they may have  
4 slipped through the cracks, so I do want to make sure those  
5 are addressed because I think it does make a critical  
6 difference in assessing what the needs are, because many of  
7 the stations that the current Investment Plan assumed will  
8 be providing supply, we actually know are closed, or  
9 closing, or closed to the public, or in some way are limited  
10 or unable to provide hydrogen supply for retail customers.  
11 Also, just to point out another important point, is that our  
12 Action Plan does cover both Northern and Southern  
13 California, and there is a tendency in the Investment Plan  
14 to focus only on the Southern California, and we would like  
15 to see that corrected. And then also I wanted to just bring  
16 forward information that could help correct some of the  
17 misconceptions that were being discussed earlier, it is a  
18 little challenging sitting in the back of the room, having  
19 to wait to provide public comment, but to address the  
20 questions that came up earlier with regard to the readiness  
21 of the technology, I just want to say that fuel cell  
22 vehicles are not R&D vehicles at this stage, they are in the  
23 hands of customers today and, in fact, the OEMs have stated  
24 that there would be more vehicles in the hands of customers  
25 today if we had more retail stations, more retail ready

1 stations. The question that was asked about the Division  
2 of Measurements and Standards and the funding that is going  
3 to them, that is specifically geared towards enabling retail  
4 sales of hydrogen. We have made tremendous progress in  
5 working through the codes and standards for the fueling  
6 interface, for the siting and the permitting of these  
7 hydrogen stations, tremendous progress has been made. This  
8 is sort of one of the last steps that is needed in order to  
9 be able to enter a real retail market. Also, just to  
10 correct another misconception perhaps, customers do pay for  
11 hydrogen fuel today, they simply cannot pay for hydrogen by,  
12 say, the volume or weight increments, they buy the kilogram  
13 of fuel. That is what those codes and standards are needed  
14 to do, to establish the regulations and the test procedures  
15 so that you know that what you pay for is what you get. So,  
16 today hydrogen is paid for generally under contract or other  
17 methods that have been used or by the fill, so you pay so  
18 much per fill regardless of how much you get in the car.  
19 Those are the methods that we are using in the interim. And  
20 then, finally, I just wanted to mention this concept of the  
21 clustering approach; it actually is not a new concept, it is  
22 certainly not new, we have kind of highlighted and  
23 spotlighted it through our Action Plan, but this was a  
24 concept that was included in the *Hydrogen Highway Blueprint*  
25 *Plan* that was done a number of years ago. So I think that,

1 you know, maybe we have gotten to the point where it is a  
2 much more highly discussed concept, but certainly want to  
3 emphasize that it is not something new, and it is something  
4 the Air Resources Board also has been using as a guideline  
5 to focus their investments through the Hydrogen Highway  
6 Program. Lastly, I think the comment that was made about  
7 biomethane and the fact that it is an excellent path to  
8 renewable hydrogen is very important and definitely would  
9 like to see the investments in feedstock and pathways to  
10 produce the renewable hydrogen as, of course, as you know,  
11 we do have a requirement for 33 percent of all hydrogen for  
12 transportation in the state to be renewable today. So thank  
13 you very much.

14 COMMISSIONER EGGERT: Thank you, Catherine. And  
15 just to clarify, you said that the updated sort of status  
16 plan would be available next week?

17 MS. DUNWOODY: Yes, Tuesday.

18 COMMISSIONER EGGERT: Which would include about  
19 station needs in that 2012 and beyond period?

20 MS. DUNWOODY: Actually, the Progress and Next  
21 Steps Report focuses specifically on the needs in 2010 and  
22 2011, so it actually gets down to the very -- consider that  
23 the Action Plan is sort of the general blueprint, and that  
24 is what we published last year, this is a refinement of that  
25 Action Plan based on what has happened since it was

1 published. We have had five new stations funded through  
2 Hydrogen Highway Network, one funded by private investment,  
3 so some new stations have come online, we have some new  
4 vehicle survey numbers, and also the automakers have really  
5 refined their deployment plans so that they have come to  
6 agreement more on, you know, how they are going to approach  
7 the early market deployment. So this is a refinement for  
8 the next two years, and we are currently working on that  
9 same refinement for 2012 and beyond.

10 COMMISSIONER EGGERT: So this would be information  
11 that would be directly relevant to the current or the  
12 pending solicitation for infrastructure?

13 MS. DUNWOODY: Right.

14 COMMISSIONER EGGERT: As to where the highest  
15 priority locations -

16 MS. DUNWOODY: That is correct.

17 COMMISSIONER EGGERT: Okay, thank you very much.

18 MS. DUNWOODY: Thank you. Yeah?

19 MS. HOLMES-GEN: Thank you, Catherine. I am  
20 wondering, you know, given the changes and the information  
21 regarding the existing fueling infrastructure that we need  
22 to make in the Investment Plan, do you have any comments on  
23 the funding amount in terms of -- does that still reflect  
24 the need, as you see it, given what we need over the next  
25 couple of years? I guess we are looking at three years.

1 MS. DUNWOODY: Our best estimates are still  
2 included in the original Action Plan as far as how much  
3 stations cost. Understood that there have been companies  
4 that have asserted and they are able to achieve some of  
5 these results at lower costs, and I certainly hope that is  
6 true, but I think for planning purposes, you know, until you  
7 have actually seen the contract, or seen the result of that  
8 contract, it is a little difficult to make that assumption.  
9 And unfortunately we have not seen that yet. So I am very  
10 optimistic that we are going to see reduced costs over time,  
11 but for now the costs that are estimated in our original  
12 Action Plan are the ones that we are operating off of, and I  
13 think there is generally accepted agreement amongst the  
14 members of the partnership that those are the right ones to  
15 use.

16 MS. HOLMES-GEN: So the amount in this Investment  
17 Plan is -

18 MS. DUNWOODY: For 2010-'11?

19 MS. HOLMES-GEN: Yes.

20 MS. DUNWOODY: I do not have enough information  
21 right now with regards to the specific needs to be able to  
22 comment on that, yeah.

23 MS. HOLMES-GEN: Okay.

24 VICE CHAIR BOYD: You did not join the double the  
25 money club.

1 MR. CARMICHAEL: Let me just give you a little  
2 advice. Your open bid should be doubling.

3 MS. DUNWOODY: Well, you know, if you go back to  
4 the original Action Plan, we estimated total government and  
5 industry funding to get to what we needed for launching a  
6 2015 commercial market was on the order of \$180 million, and  
7 we estimated that about \$120 of that should come from  
8 government. So it certainly has not been coming as fast as  
9 we had originally anticipated in that Action Plan. We were  
10 disappointed to see the drop from the \$40 million to the  
11 \$22, but with that being said, we recognize there are a lot  
12 of needs around the table. We are very grateful for  
13 whatever funding can be made available for hydrogen, and we  
14 are trying to be very specific and targeted with regard to  
15 the needs for hydrogen so that the Energy Commission can  
16 easily justify the investments that they are making in  
17 hydrogen. And at this point, I think the \$14 million is an  
18 excellent proposal for hydrogen, I would not want to see it  
19 go any lower than that.

20 VICE CHAIR BOYD: Catherine is a very astute  
21 politician, Tim. She also recognizes the grief that has  
22 been given to those who utter the words ever "Hydrogen  
23 Highway," and we all spent a lot of time trying to explain  
24 the investments we do make in hydrogen are not necessarily  
25 devoted to the "Hydrogen Highway Plan," but rather to the

1 Fuel Cell Partnership Plan and other derivatives of that,  
2 that the Air Boards and the Energy Commission -- I do not  
3 want to say wait until next year, but anyway...

4 COMMISSIONER EGGERT: Okay, we have, I think,  
5 still four more public comments. Up next is Chuck White  
6 from Waste Management.

7 MR. WHITE: Thank you, Commissioners, members of  
8 the Advisory Committee. Chuck White with Waste Management.  
9 I would like to just begin circulation of a look-up table  
10 from our friends at the California Air Resources Board.  
11 This is the Carbon Intensity of Alternative Fuels. Waste  
12 Management is looking at a wide variety of technologies to  
13 convert waste into useful energy and fuel. Biomethane,  
14 biodiesel, biogasoline, I will not go into the details of  
15 all these technologies, you have not got enough time to do  
16 that. I really appreciate the revised Investment Plan, I  
17 think it is looks pretty good. Using the word "biofuel" 110  
18 times, use of the word "biomass" 70 times, it uses  
19 "biomethane" or "biogas" 84 times, it uses the word "waste"  
20 in describing sources for these types of fuels 52 times, but  
21 it mentions biogasoline twice. And let me talk about that  
22 first. Biogasoline as a gasoline substitute, when I came  
23 before you, I really encouraged the ethanol category to be  
24 broadened, it has been broadened, I really appreciate that  
25 in the plan, it talks about gasoline substitutes; however,

1 there does seem to be an inconsistency. The summary table  
2 on page 89 uses the word "gasoline substitute production \$10  
3 million," but the parallel table within the text on page 52  
4 still refers only to "ethanol production," and I am hoping  
5 that is just an inadvertent or unintentional oversight. I  
6 think those two tables ought to be made consistent and let  
7 gasoline substitute, whether it is biogasoline, or whether  
8 it is ethanol, compete head to head through the solicitation  
9 process. So I would just urge you to consider revising that  
10 language and that table on page 52 to talk about "gasoline  
11 substitute production," rather than "ethanol production."  
12 The table I just passed out is a carbon intensity table, did  
13 I leave one for myself? Probably not, yes, I did. And I  
14 just wanted to point out that these two sheets, one for  
15 gasoline, two sheets for diesel, are the two pathways that  
16 CARB is evaluating, and I have highlighted the gasoline and  
17 diesel carbon intensity in sort of orange color, and then in  
18 yellow I have highlighted those fuels for which there is an  
19 80 percent reduction in carbon intensity, or 20 percent or  
20 less, and those are all waste derived fuels, those are the  
21 only way you can get down to such low carbon intensity, at  
22 least so far, as evaluated by the California Air Resources  
23 Board, is through waste derived fuel. My friend, Mark  
24 Leary, mentioned that there is a lot more work that needs to  
25 be done on identifying the carbon intensity of other types

1 of processes like anaerobic digestion, but I can guarantee  
2 you that, at the end of the day, when those assessments are  
3 done, they will be on the same order of magnitude as about  
4 an 80 percent reduction in carbon intensity if it is a  
5 waste-derived product, particularly if the energy to run the  
6 refining process is derived from the waste material itself.  
7 So I would just simply encourage you to keep in the back of  
8 your mind waste-derived fuels. Forty percent of the waste  
9 going to landfills is an effective source to make waste  
10 biofuels. The problem is, it does not make market sense  
11 right now in this economy to bring them to market without  
12 assistance, either from a Low Carbon Fuel Standard, which  
13 really does not start kicking in until after 2015, or  
14 through programs such as AB 118, so we really appreciate  
15 your assistance in helping us roll these things out like you  
16 have at a recent solicitation for biomethane, and a landfill  
17 gas plant that we hope to get underway in the next couple  
18 years down in Southern California. I want to mention  
19 biomethane and natural gas, really, that is the natural  
20 focus of our fleet here in California. We have 3,500 heavy-  
21 duty vehicles, of which 700 or 750 are now pressed or  
22 liquefied natural gas. We are going to be moving as quickly  
23 as we possibly can to convert our entire fleet to natural  
24 gas, away from diesel, and the biggest hurdle we have is  
25 fueling infrastructure, we have to buy diesel trucks where

1 we do not have the fueling infrastructure to be able to do  
2 that. But if we cannot get the fueling infrastructure in,  
3 then we cannot convert to natural gas as we roll over our  
4 trucks. And we really look at natural gas as the absolutely  
5 essential bridging fuel to get to biomethane. You cannot  
6 just simply roll out biomethane production and start feeding  
7 it into vehicles, you have to already have a fleet and a  
8 fueling infrastructure available to be able to run these  
9 things, so it is really essential that natural gas, as a  
10 bridging to biogas, and biofuels, is treated with a high  
11 degree of priority with the AB 118 program. I am not going  
12 to argue for doubling the size of it, but the thought did  
13 cross my mind. But we just need all the help we can to get  
14 both the fueling infrastructure in to fuel these vehicles,  
15 using fossil natural gas, and then to be able to transition  
16 to bio natural gas down the road. One last comment I wanted  
17 to make is, anything we can do with this program to help us  
18 figure out a way to get landfill gas into utility pipelines  
19 would be really extremely helpful, and perhaps the market  
20 program development aspect, \$11 million, maybe a portion of  
21 that can help us try to figure out a way to work with the  
22 utilities. Right now, the CPUC has adopted tariffs that  
23 strictly prohibit the introduction of landfill gas into  
24 pipelines, so we are basically forced to produce liquefied  
25 natural gas from our landfill gas. It is much more

1 efficient, it is much lower carbon intensity, to directly  
2 put treated landfill gas and distribute it to vehicles  
3 through a utility pipeline, if we could only do that in  
4 California today, but we cannot. So we are beginning to  
5 work with the utilities, we are trying to work with the CPUC  
6 to figure out a way that we can provide confidence to  
7 treated landfill gas, it is not going to have any public  
8 health concerns, it is not going to have any problems with  
9 respect to the utility pipelines, and it is going to be able  
10 to really provide one of the lowest carbon fuels and the  
11 most cost-effective and efficient fashion through the  
12 existing distribution network that already exists in the  
13 utility pipelines. So I am hoping, and I have not had a  
14 chance from my reading of the Investment Plan, it looks like  
15 the market and program development program of \$11 million,  
16 some of that might be able to be diverted to help figure out  
17 if we can find a cost-effective and a safe and reliable way  
18 to put the treated landfill gas into utility pipeline. So,  
19 anyway, that is about all of my comments for today. I will  
20 try to provide comments to you before your June 7<sup>th</sup> deadline,  
21 pretty much along the lines of what I said today. And thank  
22 you very much for the time.

23           VICE CHAIR BOYD: Thanks, Chuck. A quick  
24 question, is the CPUC tariff the only hurdle in the way of  
25 landfill --

1           MR. WHITE: Well, it is probably the most  
2 significant hurdle because it is an absolute prohibition.  
3 There is an old Hayden language that there has been some  
4 discussion recently in the Legislature for which, you know,  
5 I will not go into the details about that, but it is  
6 probably not going to go anywhere, it basically puts a limit  
7 on vinyl chloride and then puts a forever twice monthly  
8 sampling protocol for vinyl chloride; well, there is a whole  
9 other bunch of constituents you want to make sure you remove  
10 from landfill gas before you put it in a pipeline, vinyl  
11 chloride only being one. Most landfill gas naturally in  
12 California already meets the standard that the CPUC has  
13 established for vinyl chloride. So there are a lot of other  
14 issues that the utilities have concerns about, worried about  
15 corrosion in pipelines, which we think can be addressed  
16 reliably. And do you really need to test vinyl chloride  
17 itself twice monthly, or just monitor the performance of the  
18 refining process used to treat the landfill gas to make sure  
19 that what you are introducing into the pipeline for  
20 distribution is safe? And there are a whole bunch of  
21 indicator monitoring techniques you can use on your refining  
22 process to make sure you are staying within acceptable  
23 limits. So we think it is all doable, but it would be  
24 really helpful if we could figure out a way to work with  
25 your sister agency, the CPUC, to get these tariffs changed

1 and allow the gas to be introduced into the pipelines.

2 VICE CHAIR BOYD: I had not put them in my  
3 crosshairs, but I will now. But, well, you just reminded me  
4 of the fact that California utilities are reaching out to  
5 the state to get landfill gas, to bring it to the state.

6 MR. WHITE: Yes, they are. There is landfill gas  
7 flowing into California today, but it is produced out of  
8 state and put into pipelines out of state, but you simply  
9 cannot do it in California today because of utility tariffs.  
10 All the major gas companies have tariffs to strictly  
11 prohibit landfill gas.

12 VICE CHAIR BOYD: And my local utility here in  
13 Sacramento came to me quite some time ago and said, "We give  
14 up. We throw our hands up." I mean, they are very  
15 aggressive, very green, and they went for mass quantities of  
16 Texas-based landfill gas because you cannot get past the  
17 hurdles in California, which seems sad.

18 MR. WHITE: Well, I think there is sort of a  
19 schizophrenic attitude almost with utilities; I mean, on the  
20 one hand, they recognize they have got to figure out a way  
21 to get to low carbon fuel, and lower the carbon intensity of  
22 what they are providing in the pipeline, so one source of  
23 that, of course, is biomethane, or landfill gas, but then  
24 they all have this historic concern about liability and the  
25 concern about the statute and the vinyl chloride concerns,

1 all of which we believe can be addressed. The Gas  
2 Technology Institute has been doing a lot of work over the  
3 last several years to try to determine what is the  
4 appropriate technologies to treat landfill gas before it  
5 goes into a pipeline. There is a lot of work being done, a  
6 lot of noise, but no action on getting the CPUC to revise  
7 its tariffs. So we would very much -- and any help you can  
8 lend to that, we would be most appreciative.

9 VICE CHAIR BOYD: I do not see SMUD is a great  
10 risk-taker, but the fact that they feel they can pipeline  
11 gas from Texas in pipelines that they apparently do not  
12 think are going to go to pieces, etc. etc., anyway, we hear  
13 you. Thanks very much.

14 MR. WHITE: Great. Thank you very much.

15 COMMISSIONER EGGERT: Thank you, Chuck. And I  
16 will just note or just maybe ask for a clarification that  
17 this table that you handed out from the ARB, these are the  
18 unadjusted carbon intensity values that --

19 MR. WHITE: They are the carbon intensity of the  
20 fuel, well to wheels. If you basically look at improving  
21 vehicle efficiency, I am told, you may have potentially  
22 lower numbers. But you can do vehicle efficiency  
23 improvements across all platforms, you could put hybrid  
24 vehicles on heavy duty trucks that are burning landfill gas,  
25 or treated landfill gas, or biogas, I mean, this is

1 basically, as I understand it, the well to wheels carbon  
2 intensity. And I guarantee you, on a fuel-based, well to  
3 wheels analysis, in terms of grams of CO<sub>2</sub> per megajoule, you  
4 are never going to find anything lower than a waste-based  
5 derived fuel. Now, is waste fuel going to provide all of  
6 the fuel solutions for California? No, of course it is not,  
7 but it is the lowest hanging fruit right now that you can  
8 turn access to it, and be able to cost-effectively convert  
9 it into a useful transportation fuel.

10 COMMISSIONER EGGERT: Thank you. Okay, next up I  
11 have Todd Campbell from Clean Energy.

12 MR. CARMICHAEL: He had to leave, he had to catch  
13 a flight.

14 COMMISSIONER EGGERT: He had to catch a flight,  
15 oh, shoot. So he has a remark, it says he supports the  
16 plan, I guess, but would like to see scenarios reflective of  
17 CEC's AB 1007 work. Tom Fulks from Daimler.

18 MR. FULKS: Hi, Tom Fulks here today representing  
19 Daimler. Just in keeping with the spirit of today, let's  
20 just double it. I did not even tell you what I want yet.  
21 Before I begin, I would just like to let folks know, I said  
22 this, I think, at the last workshop, Daimler has brought a  
23 beautiful B-Class fuel cell vehicle to market in California,  
24 would like to lease more of them. The hydrogen fueling  
25 infrastructure is a challenge, so obviously we are here to

1 see what we can do to get more of that taken care of.  
2 Catherine Dunwoody, the Fuel Cell Partnership, has said most  
3 everything I wanted to say, anyhow, so I will just say I  
4 second that, and we support the Partnership's comments. I  
5 did also want to let you know that I really appreciate -- I  
6 talked to your staff offline, and I, too, had a problem with  
7 Tables C-1 and C-2 in terms of just underestimating the  
8 potential demand. And in talking to staff offline, it was  
9 agreed that perhaps those numbers could be adjusted at some  
10 point, and wait for the Fuel Cell Partnership's latest  
11 report to come out next week, see what you can do to sort of  
12 fiddle with those numbers because we think they are  
13 underestimating the demand as currently presented, and we  
14 would love to see those numbers go up before the final  
15 iteration of this plan is put to print in June, I think it  
16 is. And so I just wanted to stress that we are also very  
17 happy to hear that the solicitation for the first round of  
18 funding for the hydrogen fueling infrastructure will be on  
19 May -- early May, or whenever that date was that your staff  
20 said, I think it is the 17<sup>th</sup> of May? That is great, glad to  
21 hear it, long time coming, and hopefully the bids will come  
22 in at cost estimate that are in keeping with what your staff  
23 is saying because there is a difference of opinion between  
24 the Partnership's estimates and the ARB's estimates and what  
25 the CEC staff's estimates are. So I guess we will find out

1 when the bids come in, there is no point in even discussing  
2 it anymore, let's just wait and see what happens when the  
3 bids come in. So, with that, I would thank the staff very  
4 much for the allocation that has already been made, the \$17  
5 million, for the first round is fine. If you want to double  
6 it, we will take it, but we will take what we can get at  
7 this point, understanding that there is lots of competition  
8 for that money, and so we are very grateful. You do have a  
9 very difficult job, by the way, of trying to cut the baby in  
10 a 100 different ways, as opposed to just in half. It is a  
11 tough job, so I would not want to be in your position right  
12 now. The \$11 million coming out for the 2010-11 cycle is  
13 fine, we will take it, would like to see more, but what we  
14 hope to do, at least from Daimler's perspective, is prove  
15 the worthiness of this money by being able to show you  
16 results, being able to show you that people are leasing the  
17 vehicles, they are filling up with this fuel, and so  
18 hopefully these two funding cycles will lay the foundation  
19 for perhaps a broader allocation of funding down the road,  
20 once it can be shown that this was money well spent. So  
21 thank you very much for your efforts, I definitely  
22 appreciate it.

23 COMMISSIONER EGGERT: Thanks, Tom. And I guess I  
24 would say maybe, instead of cutting the baby, we could  
25 characterize it as a starfish.

1 MR. FULKS: That was a really horrible choice of  
2 words. I will take it all back for the record, I did not  
3 mean to say that.

4 COMMISSIONER EGGERT: Isn't the starfish the one  
5 that can actually recreate itself?

6 MR. FULKS: I was going to elude to Solomon, but  
7 if you do not want to do that, that is fine with me. Thank  
8 you.

9 COMMISSIONER EGGERT: Okay.

10 VICE CHAIR BOYD: And also, I thought the amount  
11 of money in the Plan is \$14 million, not \$11 million.

12 MR. FULKS: That is also what I meant to say.  
13 Thank you.

14 COMMISSIONER EGGERT: Okay, I think the last card  
15 I have here is Lynette Brinkman from Alliance Autogas.

16 MS. BRINKMAN: Thank you. Good afternoon, and I  
17 really appreciate the opportunity to address the committee  
18 today. My name is Lynette Brinkman and I am with Alliance  
19 Auto Gas. Alliance Auto Gas is a nationwide partnership of  
20 propane companies and certified automotive conversion  
21 centers that are converting thousands of vehicles to propane  
22 autogas in other parts of the country and around the world.  
23 They are recipients of 25 major alternative energy grants  
24 under the Stimulus program, which is being administered by  
25 the U.S. Department of Energy. Under this grant, 1,200

1 vehicles are being converted to clean burning propane  
2 autogas, resulting in an estimated 32 million pounds of  
3 annual greenhouse gas emission reduction over the four-year  
4 term of the grant. We recently submitted a docket to this  
5 committee for consideration to convert 200 emergency  
6 vehicles in California to propane autogas, which will  
7 displace 500,000 gallons of gasoline annually. This docket  
8 is immediately actionable, it utilizes technology that has  
9 been thoroughly proven over the years in Europe, Asia, and  
10 here in the United States. It will generate green color  
11 jobs and result in over two million pounds of annual harmful  
12 emission reductions here in California. This program is  
13 focusing on emergency vehicles for a couple of reasons,  
14 first is that Alliance Autogas has converted historically  
15 four *Crown Victorias* already under the EPA's certification.  
16 We continue to receive positive feedback with emergency  
17 responder fleet partners that we have currently, and second,  
18 while Alliance has started its certification process with  
19 the California Air Board, it will be some time before that  
20 system can be approved. This docket should be of great  
21 interest to the AB 118 Committee as a one-time investment of  
22 just over \$1 million to displace 500,000 annual gallons of  
23 gasoline and immediately annually reduce over two million  
24 pounds of greenhouse gas emissions in the state. This  
25 represents an excellent environmental return on investment,

1 as well as help Lesley push the rock up the hill a little  
2 further, and it is a cost-effective way of spending our  
3 money and we look forward to your opportunity reviewing our  
4 document. Thank you.

5 COMMISSIONER EGGERT: Thank you very much. Okay,  
6 I think that is all the cards that we have. Chuck?

7 MR. MIZUTANI: I think there are people on the  
8 phone that have questions or comments.

9 COMMISSIONER EGGERT: Ah, yes, good call. So I  
10 guess we will probably just - if you are interested in  
11 making a comment, go ahead and introduce yourself, or do we  
12 have a listing?

13 MS. MAGANA: Paul Staples. Paul?

14 MR. STAPLES: All right. Can you hear me?

15 COMMISSIONER EGGERT: Yes, go ahead, Paul.

16 MR. STAPLES: Okay, great. Yeah, my name is Paul  
17 Staples. I am Chairman of HyGen Industries, we are  
18 developers of hydrogen energy systems and vehicles and  
19 projects. And we have developed several projects in the  
20 state over the years with our team and also through Clean  
21 Air Now, where I was Executive Director and President of  
22 Green Air Now for four or five years in the '90s, so we have  
23 some experience in this field. Now, you know, there has  
24 been a lot of stuff stated here that just, you know, does  
25 not make any sense. First of all, okay, the amount of money

1 that you have done, the \$40 million, okay? That decision  
2 was made, okay, by the Governor, and it seems like I spent  
3 weeks fighting to make sure that money got restored to the  
4 legislation, to the Bill, and then only to come back and see  
5 that everybody that supported it, that I thought was very  
6 good in supporting it, they now have got their hands in the  
7 till or are trying to pull it in for their particular  
8 effort. I was very amazed at the Coalition people that  
9 supported it, only to find out that all they really want to  
10 do is to get that money, that was it. Okay? So now what  
11 you have done is you have taken half the money out, more  
12 than half the money out, and spread the amount for everybody  
13 else, and that is basically what has happened here in  
14 biomethane and electric and battery electric vehicles and  
15 the battery industry, and all the infrastructure for that,  
16 rather than to what it was meant to do, which was to give  
17 some economies of scale for renewable hydrogen. Okay? Now,  
18 the hydrogen is the only one that requires at least a third  
19 of the energy to come from renewable clean sources, okay?  
20 In order to get that kind of economies of scale so that you  
21 can get that third, at least a third, is to have the kinds  
22 of money to be able to do that, okay, in there, to get the  
23 economies of scale. You cannot get economies of scale by  
24 buying one, two, three, four, five stations, you have to buy  
25 20, 30, 40 50, 100 of them, you are not going to be able to

1 make it successful, and two-thirds of the money is going to  
2 fossil fuel, of course, you do not have to give two-thirds  
3 of it, you could give it all to the renewable end of it if  
4 you wanted to, but that is not going to happen because the  
5 industrial gas companies are all going to get at least two-  
6 thirds of that money, if not more, because now they can get  
7 landfill gases established as renewable, so that could make  
8 up your third. So all of it is going to go to that. So you  
9 do not have anything in there. So as soon as you come up  
10 with a proposal to put in 20 or 30 fueling stations that are  
11 viable to meet all the needs of the automobile manufacturers  
12 for their roll-out, and then you talk about, well, what  
13 about capacity, you are worried about capacity at these  
14 stations, capacity will be standard as the market expands,  
15 as demand expands, their capacity will be increased by the  
16 people who own the stations, for crying out loud. Do you  
17 think they are not going to expand the capacity if they are  
18 selling? You sell all of that hydrogen to 360 or whatever  
19 kilograms a day that they are generating and they are  
20 selling, or even approaching selling all of it, you think  
21 they are not going to expand it on their own? Of course,  
22 they are going to expand it on their own, they do not need  
23 your money, that is the whole idea, get the infrastructure  
24 started and make sure that it is viable, and that is it.  
25 And this gives a lot of credence to what people say, that

1 government does not work, because, if you were in a smart  
2 world, where you have experts in economics, you have experts  
3 in the environmental sciences, you have experts in the  
4 operation and viability and maintenance and operation and  
5 installation and management, and you would have experts in  
6 the economics end of it, you would come together, you would  
7 choose an energy paradigm that would make sense, and then  
8 you would do that and say to hell with the rest of it.  
9 Okay? And that is where you would go. And if you were to  
10 do that, you would come up with a renewable hydrogen  
11 economy, and that is why it is, and that is why people have  
12 been working so hard and fighting so hard to get this going.  
13 You have a chance here to really do that, to make a  
14 difference, to make sure that there is enough fueling  
15 stations out there with clean hydrogen, zero emission  
16 hydrogen, zero carbon hydrogen, because that is what this is  
17 all about. What this is about is making sure that we  
18 eliminate or at least reduce as much as possible the carbon  
19 footprint of our energy paradigm. That is what it is  
20 supposed to be, and if that is what you were trying to do,  
21 then instead what you have got is every Tom, Dick and Harry,  
22 with every kind of alternative that they are trying to put  
23 in for this interest, or whatever, or their advocacy  
24 interest, or whatever deal that they made in order to make  
25 sure that they support whatever they are supporting, okay?

1 But you are splitting that all up and nothing gets done,  
2 nothing gets accomplished, you do not change the energy  
3 paradigm, you do not change the things the way they are,  
4 everything stays the same, and then you feed into that same  
5 old statement, this is why government does not work. All  
6 right? And that is what we have here, okay? You could put  
7 in 30, or 40, or 50, or 100 fueling stations, okay, with  
8 that kind of money through a cost share - not \$10, not \$11,  
9 not \$102, not \$5 million a station, okay? \$5 million, that  
10 is insane, even if you were to have the capacity that the  
11 California Fuel Cell Partnership says that you should have,  
12 which is 1,500 kilograms a day, which is ridiculous, okay,  
13 because that will sit idle for years before you get up to  
14 that economies of scale, okay, but even if you were to go  
15 with that, it would not cost if you bought 100 stations, it  
16 would cost a couple, \$2 million, maybe, at most. Okay? And  
17 then you look at the cost of a regular gasoline station,  
18 okay? I mean, with the lines and the storage underneath,  
19 and everything like that? That is the more expensive  
20 option, okay?

21 COMMISSIONER EGGERT: Hey, Paul?

22 MR. STAPLES: Yes.

23 COMMISSIONER EGGERT: I wonder if I could maybe  
24 just ask you either to wrap up and we, of course, appreciate  
25 your input and your passion for this issue. But --

1           MR. STAPLES: I am in this for the climate  
2 change. I am in this for -- I have no vested interest in  
3 any kind of alternative here, other than the fact that I  
4 have been an advocate for hydrogen for years. Why? Not  
5 because I am making money off it, not because of any of  
6 that, but because it is the right solution. Okay? It is  
7 the solution. People talk about green this, green that, and  
8 it drives me nuts when people talk about green collar jobs,  
9 okay? There are no green collar jobs being proposed by  
10 anything there, except by the renewable energy economy. All  
11 right? That is the only thing. Hydrogen is the only one  
12 that you can guarantee will be renewably made if you mandate  
13 it to be renewably made, and that is all you need to do.  
14 And that is really all I have got to say because it is just  
15 frustrating to sit here and see again and again, hydrogen is  
16 put out there and it is torn apart by people with all their  
17 own vested interests in one way or the other, trying to make  
18 their thing green, okay? And that is all I have got to say.

19           COMMISSIONER EGGERT: Thank you. Do we have  
20 others on the phone?

21           MS. MAGANA: Colby Morrow.

22           COMMISSIONER EGGERT: Colby, go ahead.

23           MS. MORROW: Good afternoon. My name is Colby  
24 Morrow with Southern California Gas Company, and I of course  
25 had to jump in to the Tim and Eileen Show, I say quadruple

1 natural gas funding. Seriously though, I wanted to just  
2 ask a couple of questions, one is that the plan says that  
3 the Commissioner will consider customer rebate, I think, for  
4 electric charging meaning private houses being able to put  
5 it in, yet on the list for CNG charging for NGVs, it is  
6 listed as one of the infrastructure types, but there is no  
7 discussion of it. And I kind of find that unfair,  
8 considering I have a CNG, and I apologize to the gentleman  
9 who spoke before me, I was not involved in the bill, so it  
10 says "alternative fuels," I think natural gas, particularly  
11 biomethane, is an alternative fuel. Then, also, the second  
12 thing I wanted to bring up, I was talking with Honda and  
13 they stressed to me the need for funding for their light-  
14 duty, because right now they are the only ones hanging in  
15 there, producing light-duty, and selling them in California,  
16 and they really need to have the vehicles sold or they are  
17 going to pull out of the market. And everyone knows that  
18 the Commission pulled the \$2 million from light-duty for CNG  
19 last time, and it was my understanding, or I heard that ARB  
20 thought that the CEC was going to take over funding for  
21 light-duty because ARB used to fund it, and then I heard  
22 that ARB no longer funds it because they thought CEC was  
23 going to take it over, yet CEC pulled it out of the plan,  
24 and so I just think we really need funding for light-duty  
25 CNG vehicles.

1           COMMISSIONER EGGERT:  Okay, and just so that I  
2 understand your first comment, you are referring to home  
3 refueling for natural gas, so this is like the fill unit, or  
4 --

5           MS. MORROW:  Right, uh huh.  Pardon?

6           COMMISSIONER EGGERT:  Go ahead.

7           MS. MORROW:  No, I did not understand what you  
8 said.

9           COMMISSIONER EGGERT:  Oh, I was just clarifying  
10 that you were talking about specifically the home refueling  
11 for CNG.

12          MS. MORROW:  Right, right, because on page 25 and  
13 26, you discussed residential charging, but then, in the  
14 natural gas section, and I do not have my page number  
15 exactly, you list home refueling for natural gas vehicles,  
16 but I -- it is on page 65 -- you say the infrastructure  
17 consists of these different types, and CNG home refueling  
18 appliances is the very first one, yet there is no discussion  
19 of those whatsoever, nor any consideration of potential  
20 funding for them.

21          COMMISSIONER EGGERT:  Okay, I -

22          MS. MORROW:  And just, I do not know, the  
23 clarification of is ARB going to start funding light-duty  
24 CNG because the Commission is not?  That -- I would like to  
25 understand that whole issue.

1           COMMISSIONER EGGERT: I am looking to the staff  
2 if there is any comment.

3           MR. MIZUTANI: On the home refueling, we will take  
4 a look at it, but -- well, we will take a look at it.

5           MS. MORROW: Thanks.

6           COMMISSIONER EGGERT: Okay, and again, I would  
7 encourage submitting more specific comments relating to both  
8 vehicle and home refueling incentives, or other activities  
9 that would be relevant to that.

10          MS. MORROW: Right.

11          MR. CARMICHAEL: Colby, I am just going to jump in  
12 here. On the light-duty vehicle, I think Commissioner Boyd  
13 made the point this morning, so I did not really delve into  
14 it in my comments, but it will be in part of our written  
15 comments, I focused on CEC cutting the light-duty or vehicle  
16 incentive money, period. But we want to be very careful  
17 about CEC assuming ARB is going to cover something, and vice  
18 versa, and it really not being covered by either agency.  
19 And we will address that in our written comments.

20          MS. MORROW: Right, exactly, I mean, I guess that  
21 is kind of the point is, ARB is assuming something, and then  
22 it was cut, and that --

23          COMMISSIONER EGGERT: We have a representative  
24 here.

25          MS. MORROW: -- that is problematic for the

1 market.

2 COMMISSIONER EGGERT: Jack?

3 MR. KITOWSKI: Yeah, let me also just say, for  
4 those who are not aware, and maybe we should have said this  
5 earlier, the ARB is in the process of its funding plan and  
6 we have had four workshops so far and our upcoming funding  
7 plan, and we are planning on going to our Board June 25<sup>th</sup>, so  
8 at this point we are tweaking our final recommendations and  
9 that will be public in about a month, so please engage on  
10 our side, as well. At this time, there is no light-duty CNG  
11 funding in that funding plan. And we do coordinate at the  
12 staff level quite a bit, so, I mean, I do not want anybody  
13 to get the impression that, while we were not talking it  
14 fell through a crack, but that is an area where there is no  
15 funding in ARB's plan either.

16 MS. MORROW: All the more reason for CEC to  
17 include it in their's.

18 COMMISSIONER EGGERT: Okay, good. Thank you very  
19 much for the comments. How many more do we have on the  
20 phone?

21 MS. MAGANA: One.

22 COMMISSIONER EGGERT: One more, okay. Go ahead.  
23 What is the name?

24 MS. MAGANA: John Boesel.

25 COMMISSIONER EGGERT: Go ahead, John.

1 MR. BOESEL: Okay.

2 MR. CARMICHAEL: I think we are just about out of  
3 time!

4 MR. BOESEL: You are out of line, Mr. Carmichael!  
5 Just a few quick comments. First of all, I think the staff  
6 has done some really good work, but I would really -- I do  
7 not think this has been said yet today, and I do not really  
8 want to repeat anything that has been said, but I would  
9 encourage a plan that gives the staff a lot more flexibility  
10 and that we really look at these targets, these amounts as  
11 targets and ranges, and not specific allocation, because I  
12 think a good investor really wants to be responsive to what  
13 comes in the door. I cannot think of any investment fund  
14 that pre-selects and determines how much they are going to  
15 put into any specific category. They certainly do not do  
16 that down on Sandhill Road. So I would really encourage --  
17 and even the Advisory Committee members -- to think of these  
18 as ranges and targets and not try to hold the CEC to the  
19 specific dollar amounts because things come in the door and  
20 then you really want to be responsive and fund the areas  
21 that are really making the most sense. Along those lines, I  
22 would really recommend the elimination of all the  
23 subcategories. I think the proposer should just submit one  
24 proposal and then you may want to submit a proposal for a  
25 production plant, a refueling station, and a vehicle, or

1 more, in a particular category. And if you have the  
2 subcategories, it means they have to submit multiple  
3 proposals, it becomes expensive and time consuming, and we  
4 really want to find ways to shrink the full proposal time.  
5 And, again, getting back to my first point, as tough as it  
6 is to allocate how much should go into a category, the  
7 subcategories are even more difficult. So that is one thing  
8 I would say. Then, lastly, there are going to be two big  
9 developments, regulations and legislation proceeding that  
10 may affect the plan, one is, depending on what CARB does  
11 with the Clean Fuel Outlets Program, if there is a mandate  
12 for hydrogen stations, I think that could really impact the  
13 CEC's plan and reduce the need for CEC funding for hydrogen.  
14 And then, also, as Congress goes ahead and passes the  
15 Natural Gas Act as currently proposed, that could also  
16 really increase incentives significantly for natural gas,  
17 and that is something I think the CEC should really pay  
18 attention to. And then, too, there is some significant  
19 discussion about LNG vs. CNG and the greenhouse gas values.  
20 I would also encourage the CEC to look at the difference  
21 between the high pressure direct injection, high efficiency  
22 natural gas engines vs. the electric ignition engines, the  
23 former being much more efficient in reducing greenhouse gas  
24 incentives, and I would encourage more of the incentives  
25 going in that direction, and then, if the project and the

1 trucks were going to be used to run on renewable natural  
2 gas vs. fossil natural gas, I would give that project  
3 additional credit. And then, lastly, if there is anybody  
4 else on the line other than Tim Boyd, Tim Carmichael, and  
5 Jim Boyd, and Anthony, I would encourage people to contact  
6 their legislators to support the AB 118 program during these  
7 tough budget times, this is a very important program, and  
8 this program is going to be under attack during this year's  
9 budget.

10 VICE CHAIR BOYD: Rest assured, John, there are  
11 more people than that in the room here, so your message did  
12 not fall on just those ears. Thanks.

13 MR. BOESEL: Okay, thank you. Have a good  
14 weekend.

15 COMMISSIONER EGGERT: Thank you, John, and thanks  
16 for the input. Is that it?

17 MR. MIZUTANI: One, Danielle Fugere from Friends  
18 of the Earth wanted to have us read her question, and then  
19 also there may be one last batch, I guess, of callers who  
20 may want to make comments.

21 COMMISSIONER EGGERT: Okay.

22 MR. MIZUTANI: So let me read Danielle's question.  
23 "Will the revisions made to the bio-refineries scoring  
24 criteria be extended to all new solicitations, acknowledging  
25 that some of the specific criteria will differ across

1 categories?" So I guess the short response is that, we  
2 learn from each solicitation, and our intent is that the  
3 level of detail in terms of scoring criteria is specifically  
4 for sustainability, but probably will be considered in  
5 future solicitations; but, again, it would be based upon, I  
6 think, the results of each of the subsequent solicitations  
7 in terms of how we would modify it. So is there anybody on  
8 the phone who would like to make a comment?

9 COMMISSIONER EGGERT: All right. Go ahead,  
10 Shannon.

11 MS. BAKER-BRANSTETTER: Sorry, I had to step out,  
12 but I did review both drafts and I think that there were  
13 very thoughtful improvements in the second draft, and I  
14 think it is overall excellent. I am still a little  
15 concerned about the research and standard setting for  
16 hydrogen infrastructure being done after the infrastructure  
17 is already being developed. I know there are a lot of  
18 really smart people working on this, so I am sure a lot of  
19 thought has gone into that, but I also know there is a lot  
20 of pressure to get the money out quickly, and so I guess I  
21 would just encourage people to continue to pay attention to  
22 that and make sure that the standards that are later set  
23 will not require expensive retrofits of infrastructure that  
24 goes out later. Smart Meters is an example where that is  
25 kind of happening, and so I hope that does not happen here.

1 So that is all. Thanks.

2 COMMISSIONER EGGERT: Good point. Okay, anything  
3 else, Chuck?

4 MR. MIZUTANI: No, I think that is it.

5 COMMISSIONER EGGERT: Okay. I will look to my  
6 fellow Commissioner here if he has any closing comments.

7 VICE CHAIR BOYD: Well, my only closing comments  
8 would be to a) thank everybody for the very thoughtful  
9 efforts they made today to give us some input. I found this  
10 frankly very helpful. I think we have reached yet another  
11 level of understanding between each other on how the program  
12 works, what the environment is like out there, and what we  
13 are mutually trying to accomplish, and I think we are all  
14 headed in the same direction. So I appreciate the fact that  
15 we are all able to devote this much time to this effort, and  
16 particularly those of you who stayed until the bitter end, I  
17 appreciate that very much. I do look forward to us  
18 interacting individuals more in the future as we try to  
19 develop an advocate's toolkit to provide you some assistance  
20 in dealing with other parties who have an interest in our  
21 program and, quite frankly, helping you advocate for us. It  
22 means a lot to us, of course, but it means a lot to members  
23 of the Legislature to hear from other than the bureaucrats  
24 about the programs and the successes and directions and need  
25 for it in the future. So I think a very important

1 discussion took place today about the need to work on that,  
2 and to provide you all the information that you need to do  
3 that, and I know Commissioner Eggert and I, and the staff,  
4 will look to that right away because now is that season in  
5 Sacramento, and we need to address it, and we just got a  
6 slight introduction to it in the committee hearings that  
7 were held this week, and there is still an awful lot of  
8 misunderstandings and myths out there that need to be  
9 addressed. So we definitely need to work together on that  
10 point, plus we have got a lot of very helpful comments, and  
11 we have a few of you coming back to us with additional  
12 information that will help us ultimately frame this  
13 Investment Plan for yet another year. So I thank you all  
14 for that.

15           COMMISSIONER EGGERT: I would just like to take a  
16 brief second and echo those comments, again, very much  
17 appreciative of everybody putting their time in today and  
18 providing input, and very much looking forward to ongoing  
19 input as we come towards the committee draft. But I would  
20 encourage folks to do that as soon as possible so that it  
21 can be properly considered, and then I guess I would  
22 characterize it perhaps as, I like the idea of an advocacy  
23 toolkit, but maybe even more as an educational toolkit in  
24 that, in addition to advocating to the program, educating  
25 people about the importance of these investments, this is

1 sort of a really tremendous program and opportunity that we  
2 have to be able to have the luxury of these funds, these  
3 public funds, and a significant responsibility to make those  
4 investments wisely. So you know, very much appreciative of  
5 all of the offers to help educate both the Legislature and  
6 the general public on the importance of this program and  
7 preserving it. Peter, you had a comment?

8 MR. WARD: Yes, I just had one more thing to say.  
9 I think we are done, so I think this is probably the right  
10 time to say this. I would like to personally thank Mike  
11 Smith and Chuck Mizutani for all the help they have been in  
12 this program in the last two years, getting this thing  
13 started. It has been a yeomen, Herculean effort on their  
14 behalf. They will be retiring here very soon and so I am  
15 kind of one of the last men standing here. I just want to  
16 thank them for all the contributions and the tireless  
17 efforts that they put in on behalf of this program, and I  
18 personally would like -- Mike is not here, he is at a  
19 meeting with the Chinese Delegation, but I would like to  
20 applaud them both. [Applause]

21 VICE CHAIR BOYD: Well put, Peter, and thank you  
22 very much for doing that. I just refuse to accept that  
23 reality, but you have reminded me of that, that Chuck and  
24 Mike walk out the door here any day now is just going to  
25 hurt that much more. We have been wounded yet again.

